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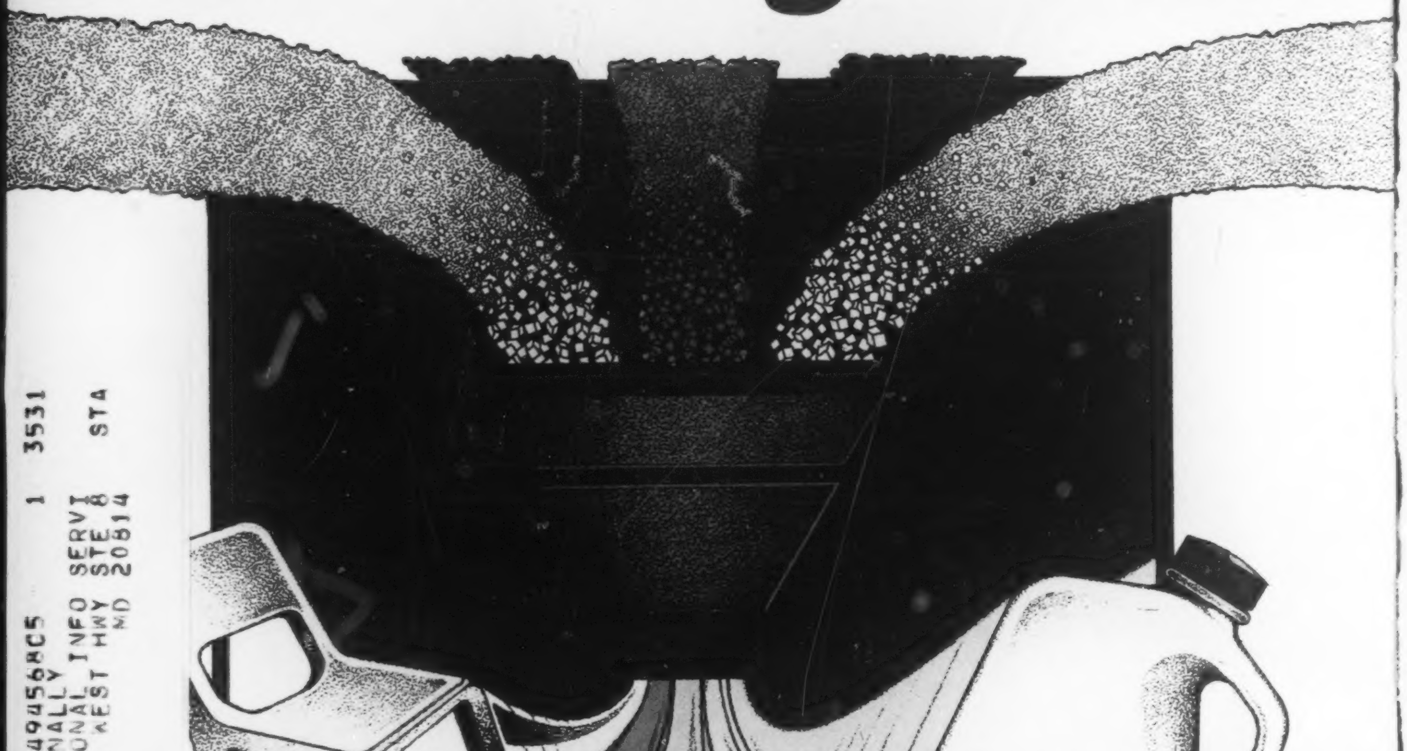

Transportation: Multimodal gets ICC boost

Law: UCC limits vendor clauses

Negotiations: Bids alone are not enough

PurchasingWorld®

Helping you manage the business of buying

November 1987 Vol. 31 No. 11

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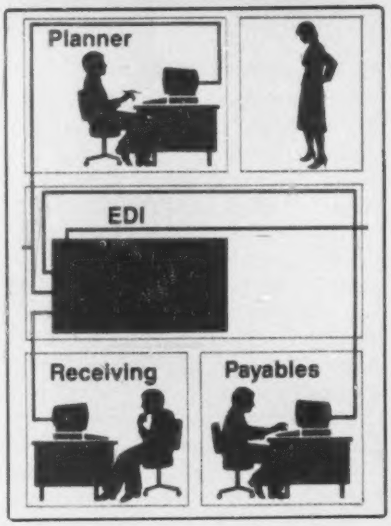

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PW PREDICTS

Robert S. Reichard, executive editor

Price increase fears overdone

Budget for more industrial price increases, which will come in at a faster clip than in 1985 and 1986.

Much of the acceleration rests on two factors: Higher operating rates and rising import prices. Both are likely to be moderate—with little to suggest an inflationary spiral.

This is certainly true of operating rates. The capacity glut of the past few years has been drying up (operating rates are up about two percentage points—to 81%—over the past year), still under the 85% level that traditionally has signalled a sellers' market.

More significant, this operating rate is not likely to rise much above current levels in the quarters in the near term. Recent capital spending surveys indicate that U.S. industry will add 4.5% to the nation's factory potential this year—with 5% looming for 1988, in line with expected production gains. No change in the overall supply/demand equation.

Coming back to import prices, fears seem to be overdone. Some categories—e.g. machinery—have risen significantly. But most U.S. manufacturers have been holding back, hoping to use this price advantage to recapture lost business.

In other product lines, foreign producers continue to absorb the weakening dollar impact by settling for thinner profit margins. We estimate that the import factor may have added one percentage point to price averages this year—hardly catastrophic.

Also, the raw material rise of the past 6-12 months seems to be running out of steam. A spokesman for Wharton Econometrics feels that oil and other basic raw materials will remain more or less flat over the next couple of years.

The fact that producers of many of these commodities, such as steel and nonferrous metals, are showing profits for the first time in years, should also act as a price-rise inhibitor. A lot of closed-down capacity is being reactivated—and could restrain further big increases.

Then there's the Fed. The recent rise in interest rates will likely have some impact, at least slowing marginal demand in capital equipment, construction, and big-ticket consumer items.

And the continuing moderation in wage boosts can't be ignored. Even the Ford auto contract will be adding only 5% a year to Detroit production costs. Moreover, subtract expected productivity gains from the new pact, and unit labor costs should rise less.

These won't prevent some increases. It's no surprise that more than half of surveyed NAPM members are now reporting higher price tags. But keep in mind that most increases are small and selective.

Upshot: Near-term price advances will remain in the 4% range over the next 12 months (overall industrial price average basis). Nor are services likely to rise at any faster rate.

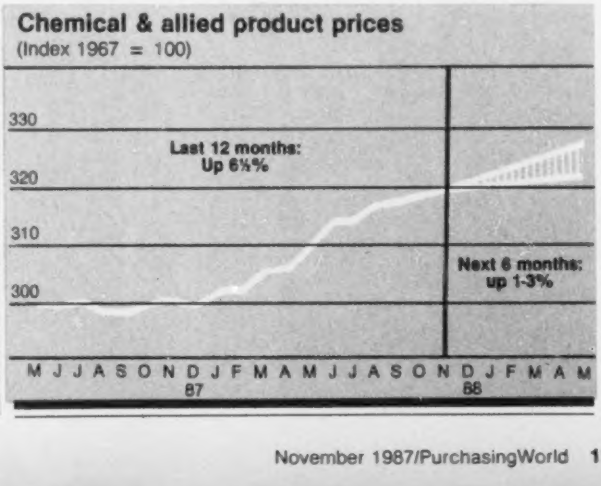
Chemicals

CURRENT SITUATION: A spate of price boosts has been posted for the October-December period. And while not all seem to be holding, overall averages should record their fourth consecutive quarterly advance—a marked contrast to 1986. **Blame the continuing price rise on a combination of factors: higher petrochemical feedstock costs, dwindling excess capacity, strong domestic demand, and a weaker dollar. Inorganics as well as organics are sharing in the overall price advance**—as chlorine, caustic soda, and soda ash all move up.

DEMAND: Chemical output for the year as a whole looks to be up close to 5%. Zero in on some individual subgroups, and even bigger gains are suggested. Plastic resins, synthetic fibers, and organic chemicals should see increases of 8%, 6%, and 6%, respectively. On the other hand, paints will be lucky to equal 1986 levels. **As for 1988, all signs point to similar advances.**

SUPPLY: There's still generally more than enough to go around—though operating rates have tended to rise a bit in recent months. On an overall basis, the industry is now operating at 83% of its potential—up some three percentage points from late 1986 levels. And there has been tightness in some of the popular commodity plastics. **But the prognosis remains good as the industry embarks on a new round of expansion.** Recent surveys suggest 10% increases in capital spending during both 1987 and 1988.

PRICE OUTLOOK: Further increases. With supply/demand balance stabilizing and petrochemicals levelling off, they'll be on the modest side. The overall increase over the next 6 months should average out in the 1-3% range. The longer-run outlook is equally encouraging for buyers. For 1988, little more than a 4-5% increase is anticipated.



Chemical & allied product prices
(Index 1967 = 100)

Environmental outlays rise

Substantial sums will be spent on pollution control and health/safety equipment over the next year or so.

The overall percentage of manufacturers' capital spending earmarked for such non-productive purposes is down from the double-digit readings of the mid-1970s. But the combined pollution-health/safety figure (near 7%) is still something to be reckoned with. Dollar amounts will be up substantially to 17.7% this year and another 5.6% in 1988.

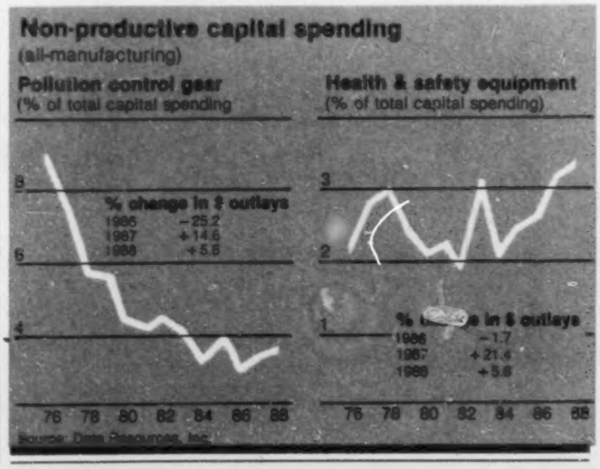
These projections culled from a recently released Data Resources, Inc. (DRI) survey, indicate that double-digit rates will continue to plague a few industries. Thus the chemical sector will probably earmark 13% of its capital spending dollars for these government-mandated purposes next year—with almost-as-big 10-11% chunks anticipated by the petroleum and instrumentation industries.

Zero in on the pollution control equipment and even bigger outlays could be ahead. Reason: Despite a Reagan veto, Congress has passed the Clean Water Act and could possibly approve acid rain legislation soon.

In addition, public concern over toxic waste will keep the heat on business. Not surprisingly, this segment of spending is targeted to jump a hefty 26% this year.

On a dollar basis, the biggest investment overall in pollution control equipment will be in the chemical and petroleum industries where about $1.4 million is expected to be shelled out in each area next year. Nor will nonmanufacturing industries escape unscathed—electric utilities are expected to spend near $1.3 billion on pollution-control devices in 1988.

In the meantime, manufacturers are also increasing their health and safety investment sights. Watch for spending to increase 21.4% and 5.6% in 1987 and 1988.



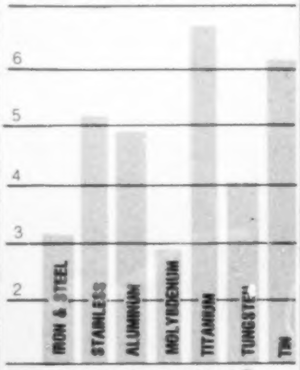
Non-productive capital spending
(all-manufacturing)

Source: Data Resources, Inc.

Metal powders

More solid growth lies ahead—with the average annual advance put near 3% over the next few years. These new estimates, supplied by Business Communications Co. of Norwalk, CT, suggest that several metals (stainless steel, aluminum, titanium, tungsten, and tin) will actually exceed this rate—though iron and steel powders (by far the biggest tonnage item) will pretty much follow the overall average. Much of the projected advance assumes gradual development of metal injection molding techniques which are expected to supplement the existing press-and-sinter metallurgy.

Metal powder growth
('87/'92 annual rate)



Source Business Communications Co

Titanium

Prices are generally higher—as recent increases in aircraft quality sheet and plate and commercially pure plate hold up. Also a new 4% increase has just been posted on premium and rotating grade billet. This should be it for a while in the billet area as the new quotes are guaranteed through next June. On the other hand, cost pressures in the fabricated metal sector continue to build up. Thus basic sponge recently climbed to near $4/lb.

Aluminum

More upward moves here—with producer ingot and billet rising to 82¢/lb and 90¢/lb, respectively. Fabricated metal also continues to move higher—as both aircraft quality products and non-heat-treatable sheet and plate producers post advances. Another sign of basic strength: Worldwide stocks have fallen to 1.6 million metric tons—the lowest level since 1973-74. This is the equivalent of less than six weeks' supply at current consumption rates—some 2½ weeks under the 8½ week normal level. But supplies should be on the increase before too long.

Lead

Figure on relatively weak prices—with quotes probably falling to as low as 35¢/lb by year end. Reason: Increasing supplies and competition from inexpensive European metal. Reinforcing bearish feelings is the fact that the current battery buying season has not been as robust as originally anticipated. Indeed, with battery warehouses overstocked, primary and secondary lead producers describe current demand as "average to low." Nor is the long-term consumption outlook all that bullish—as new forecasts point to only 1.3% annual increases in Free World demand.

Steel

Still no indication of any leveling off in prices. Thus increases have recently been put in effect for both cold-rolled strip and tinplate. And on January 1, boosts are scheduled for hot-rolled cold bar, cold-finished bar, carbon and alloy plate, and stainless sheet. Behind the continuing trend: Relatively snug supplies, lower imports, and better-than-expected demand. On the latter score, shipments this year are expected to reach 71 million tons. That's up about one million from last year—a lot better than the several-million-ton drop projected at the beginning of the year.

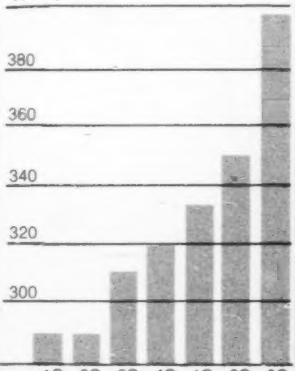
Zinc

Further price declines are likely—as increasing supplies begin to hit the market, both from restarted Canadian Cominco facilities and from additional overseas merchant metal. Best bet: A price decline into the upper 30s range by year end—a far cry from the 47¢/lb peak hit just a few months ago during the long Canadian strike. Relatively sluggish demand is also helping to keep prices under pressure—as chewup by the auto and construction industries (the two largest markets) drops under year-ago levels.

Paper and products

Firming prices are still the order of the day. On the linerboard front quotes are now solidly in the $380/ton range—with further advances likely by early 1988. Newsprint, meantime, is scheduled for another boost (6.6%) in January. In fine paper, high operating rates and strong demand have encouraged a number of uncoated free sheet producers to post increases ranging upwards of $40/ton—enough to bring some transaction prices up to book levels. Multiwall sack quotes are up 6.5-9.5%—with large grocery sacks advancing by an equally impressive 7-11%.

Linerboard prices
($/ton)



Express mail versus fax

Don't write off speedy overnight delivery services—at least not yet—despite the booming fax market. In any case, there is no evidence of any impact—as the "letter category" volume of the fast

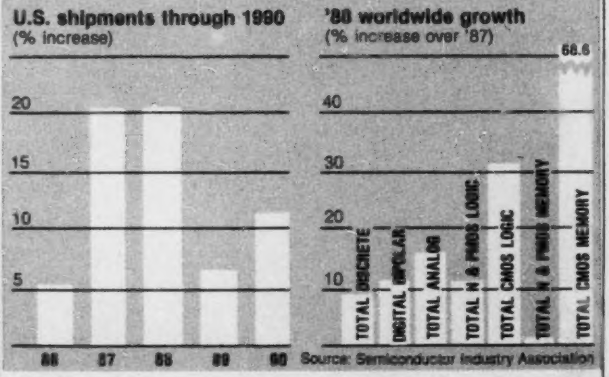
Semiconductor market strengthening

This year's semiconductor industry recovery seems sustainable as the industry seeks to wake from its slumber that began in mid-1984. Indeed, if a new Semiconductor Industry Association projection is anywhere near correct, 1988 will be a carbon copy of the current 12-month period—20% gains in U.S. shipments for both years.

- **CMOS Logic Devices:** Fueled by growth of application-specific integrated circuits (ASICs) and 32-bit microprocessors, dollar billings should grow 40% this year (to $5.7 billion). Another 33% gain in 1988 will lead to a $7.7 billion shipment figure.
- **CMOS Memories:** Shipments which totalled less than $1 billion last year should jump 93% this year (to $1.8 billion) and another 69% in 1988 (to $3.2 billion).
- **N/PMOS Logic:** This $2.8 billion 1986 market will grow 25% this year, 11% in 1988 and less than 2% annually over the following two years.
- **N/PMOS Memory:** A 9% increase this year will be followed by a less than 1% gain in 1988. And in 1989 and 1990 losses of 26% and 22%, respectively, are anticipated.
- **Analog products:** Billings of just over $5 billion last year will grow 18% this year and 16% in 1988. Further 8.5% and 10% gains in 1989 and 1990.
- **Digital bipolar products:** Last year's $4.2 billion shipment total will move up to almost $6 billion by the end of the decade.
- **Discrete devices:** This year's 14% gain (to $7.1 billion) will be followed by 9% and 5% increases in 1988 and 1989. And by 1990 another 7% advance will push totals to near $8.6 billion.

Semiconductor pricing continues to be a phenomenon. As unit sales increase, a product's maturity grows and production yields increase—ergo prices often actually fall as demand increases.

Semiconductors: Portrait of a growth market



Source: Semiconductor Industry Association

PW PREDICTS

Copper

CURRENT SITUATION: The red metal is riding high—up about 35% since the beginning of the year. Behind the pickup are improved demand, low inventories, and the depreciation of the U.S. dollar. Quotes are now close to their highest level in seven years. Add in reduced costs (some of Phelps Dodge's metal can be turned out for only 57¢/lb)—and the industry has suddenly become healthy again.

DEMAND: Markets remain firm. North American producers are said to be booked up through year-end. Even Kennecott's recently reactivated Bingham, UT production is said to be fully committed. The Copper Development Association reports show **shipments of the metal and its alloy running 8% ahead of 1986.** Some impetus comes from Detroit; each car now uses close to 50 lb of copper, vs. 36 in 1980.

SUPPLY: Snugness is suggested by the fact that worldwide stocks have dropped more than 60% since 1983—their lowest level in 13 years. The International Wrought Copper Council figures that new cathode output will fall 100,000 tons short of demand this year. **The long-run prognosis, however, suggests ample supplies—**as output from the Bingham mine and the New Guinea Ok Tedi facility hit the market.

PRICE OUTLOOK: Given the current supply-demand situation, we can project another 3-10¢/lb increase by early next year. Beyond that, some industry bulls are talking in terms of $1+/lb levels. This may be little more than wishful thinking because 1) production costs will remain low, 2) global copper output will be rising, and 3) global industrial production gains (a measure of usage) will be under 1987 rates. **PW equations point to 1988 quotes averaging near 95¢/lb.**

mail business continues to grow at a rapid clip. One reason: There's some disadvantage to using current low-cost fax machines—they use thermal paper which is thin and has a slippery texture. Another limitation to fax: For legal purposes, original documents are often crucial. Nevertheless, some longer-run fax impact on overnight service seems inevitable as improved cheaper machines come to the market in larger quantities (nearly a million units will be clearing the market annually by 1992).

Telephone switching equipment

IBM has cut prices as much as 10% on four new PBX models. Also because the new entries are more reliable and easier to maintain, the overall cost over the life of the switches is probably closer to 20%. In any event, the products are said to take up less pace, require less power, and should be much easier to modify as time goes by and new features become available. But whatever the changes, these products are now quite competitive—with some industry estimates putting the tags at only half of what they were as recently as two years ago.

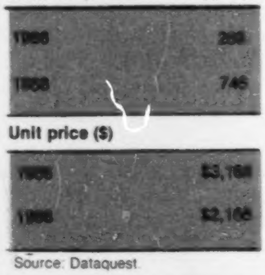
Cellular phones

Plenty of discounting here—with some name-brand models selling for as much as 40% under official list levels. Behind the slide: Increased competition and higher volume output. In any event, the least expensive models now average in the $800-900 range—and are expected to drop off even further (to near $500 by as early as 1990). User costs, however, remain rather high. There's usually a service charge of $25-40/month. Add on per-minute charges for a modest number of calls—and these "operating charges" can range from $150-200/month.

Printers

Prices of low-end laser types are beginning to drop sharply. New dollar value and unit volume figures supplied by Dataquest tell the story. Compare the two sets of numbers, and last years' average unit price came to $3,166. By next year the estimated unit value drops by a hefty $1,000—falling to under $2,000. Nor is that the end of the line. Thus a big push is in the making for a $1,000 printer. But given current dollar weakness (print engines come from Japan) this still seems a long way off—with no such low-level entry deemed likely over the next year or two.

Laser Printers

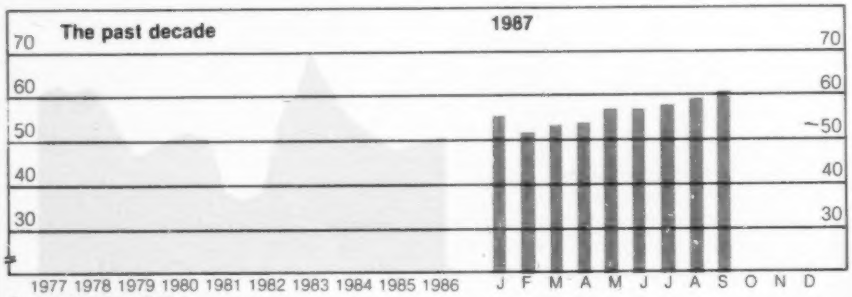


Source: Dataquest

BUSINESS DATATRAK

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Fourth quarter looks rosier

This final quarter in 1987 is turning out better than anticipated.

The reasons: l) a pickup in export volume, with perhaps some fractional decline in imports; 2) continuing relatively strong consumer buying, and 3) a modest increase in inventories to meet expanding sales.

Judging from key business indicators, this pickup will spill over into early 1988. Thus the NAPM Business Barometer (a yardstick of activity one or two quarters out) has moved up over the 60 mark.

This marks the 14th consecutive month that the barometer has registered above 50—a level that indicates the economy is expanding.

Robert J. Bretz, chairman of the NAPM Business Survey Committee that generates this report, notes that the year-to-date index has averaged out at 56.6—which for a full 12-month period is consistent with a 3.8% increase in real GNP.

Optimism is also spreading to the business community. The story on the following page, for example, indicates that the nation's top corporate executives are becoming increasingly positive on the economy—with more than three out of four now expecting an increase in incoming orders over the current quarter.

The bullish business assessment is supported by relatively strong industrial distributor sales, currently running about 7-8% above early 1987 levels (top chart, right).

Moreover, most of the industrial distributor sales gain is real. Prices of these products have risen less than 1% over the last year.

Capital equipment is another sector showing unanticipated strength. Note (from the chart top, center) that incoming civilian orders here, too, are running well ahead of early 1987 levels. Some of this represents improved export business. But the lion's share is domestic, indicating that American firms are lifting their investment sights along with their new-found optimism.

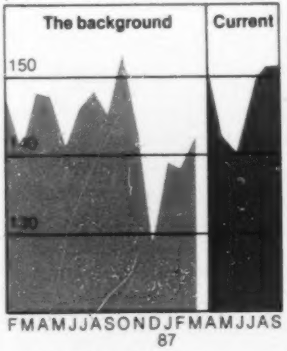
This optimism also seems to be spilling over into the consumer area. The Conference Board reports three consecutive monthly advances—close to a 15-year high.

To be sure, there have been some disappointments. Auto sales in the third quarter ran at only an 11.5 million unit seasonally adjusted annual rate (chart, top right).

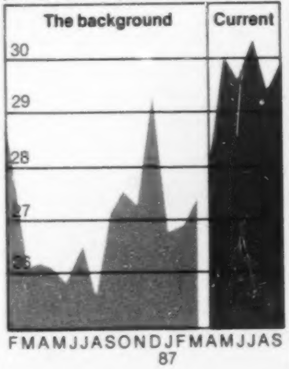
But even in autos there are signs that things might be picking up. The Conference Board consumer confidence survey shows that individuals' plans to buy vehicles picked up considerably over the past month—to 8.4% of all surveyed households ver-

Leading indicators

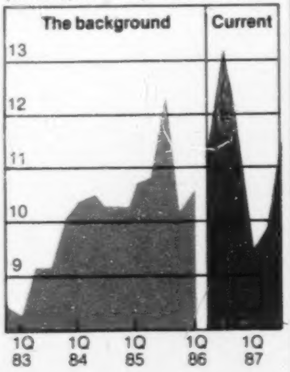
1. Industrial distributor sales
(Index: 1977 = 100)



2. Capital equipment (non-defense)
(Bil. $, seas. adj.)



3. Auto sales
(Millions, seas. adj. annual rate)



sus the 7.1% 30 days earlier.

What does it all add up to, then? Right now the combination of ordering, buying and general optimism suggests that industrial production will advance at near a 4% annual rate into early 1988.

Fleet car costs under scrutiny

Strategies and policies on the handling of fleet cars continue to change—and the emphasis now seems to be on ways to have employees share more of the expense burden. Some of the latest trends include: 1) more reliance on employee-supplied vehicles; 2) some decline in the number of businesses permitting personal use of company-supplied vehicles, and 3) a significant increase among firms that penalize employees for accidents and traffic violations.

According to Runzheimer International, which surveyed more than 2,000 North American fleet operations, some 12% of the respondents now have employee-provided fleets—up 5% from two years earlier. The majority of firms, however, still rely on company-owned or leased fleets, while a fair number opt for a combination of all three forms of ownership.

The study, which covers more than 600,000 vehicles, also notes that insurance rates continue to climb. Increases are more prevalent in company-provided fleets than in employee-provided ones. A Runzheimer spokesman says "this constrast in cost experience is a significant reason why some firms have switched to an employee-provided program."

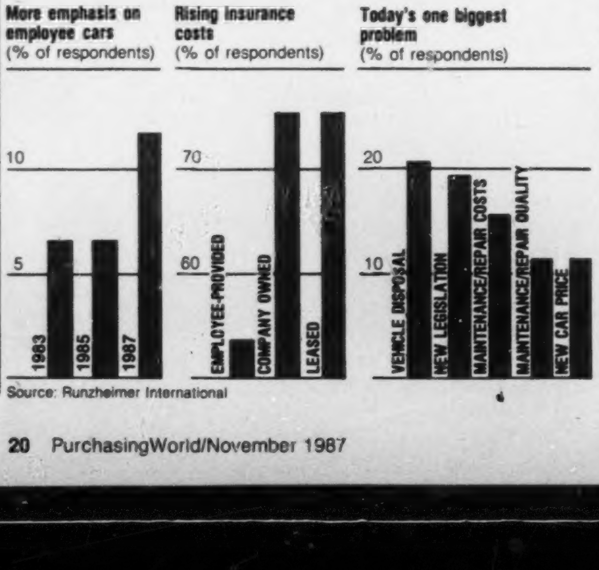
Nevertheless, attempts are being made to constrain insurance costs in company-provided fleets, too. Some of the approaches are: 1) new risk management and fleet safety programs; 2) increased deductibles; 3) self-insurance programs; and, 4) improved maintenance to ensure car safety and performance.

The main business car problem today is getting rid of the vehicle (21% of the respondents dubbed this the key headache). One probable reason: a continuing soft used car market. Other problems, in descending order of mention: new government legislation (19%), maintenance/repair cost (16%), maintenance/repair quality (12%), and new car prices (12%).

Other key findings of the survey:

- The average insurance bill last year came to $600—nearly double the $324 figure of just two years earlier.
- The most popular company-provided car: a 4-door intermediate with front-wheel drive and a 6-cylinder engine. Most popular options: air conditioning, automatic transmissions, power steering and brakes, radio, cruise control, and all-weather radial tires.
- The median replacement cycle: 36 months, 60,000 miles.

The changing fleet car scene



More emphasis on employee cars
(% of respondents)

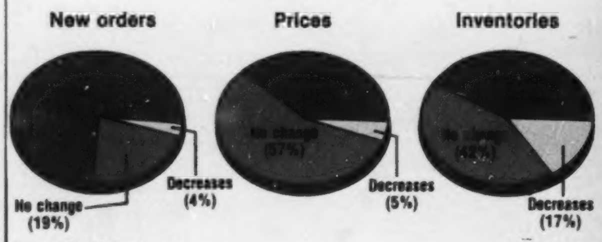
Rising insurance costs
(% of respondents)

Today's one biggest problem
(% of respondents)

Source: Runzheimer International

The fourth quarter outlook

(% of factory executives anticipating changes vis a vis a year ago)



Source: Dun & Bradstreet

Execs say 1988 looks O.K.

The nation's top manufacturing executives remain bullish on near-term business.

Judging from a new Dun & Bradstreet survey, corporate America's top brass are even more optimistic than they were three months ago. During the current quarter, for example, 77% of survey respondents said they expect new factory orders to increase over last year's rates. Six and three months ago only 70% and 73% of respondents believed orders would be up.

Equally significant, most of the remaining respondents see no change—only 4% actually anticipate a slower rate of incoming orders.

Factory orders are expected to follow a similar positive pattern. The figures here: 79% anticipate increases, 16% see no change, and only 5% expect some decline.

Also on an upbeat note: Inflationary pressures are expected to remain quite modest—despite the steadily improving business picture. At latest report, only 38% of the surveyed factory executives were anticipating fourth quarter price increases compared to a year ago. That's pretty much unchanged from the 35% and 37% readings of six and three months ago, respectively.

But inventories—prodded by rising activity—are expected to rise a bit. Specifically, some 41% of survey respondents now expect their stocks to rise in the current quarter—up 5% from just 3 months earlier.

Still further confirmation of strong business optimism comes from yet another survey by the Conference Board. It shows the Board's index of business confidence holding at 55—comfortably above the neutral 50 mark and the highest such reading in about a year.

CURRENT PRICES

Is the current price breather deceptive?

Uncle Sam's bellwether industrial price index took a breather last month.

But the lull could be deceiving. Reason: It was all due to new easiness in the energy sector. Eliminate this category, and the slow rise of this past spring and fall continued unabated.

The impact of the energy decline can best be appreciated by looking at the magnitude of the fall-off—more than 2% over the latest 30 day period (or better than 24% at annual rate). Zero in on fuel oil and gasoline, and even stronger declines were noted. About the only items to advance here were natural gas and LPG, where small increases were reported.

At the other end of the price spectrum were capital goods—where a solid 0.7 % rise was recorded over the past month. Blame the advance on both increasing demand and the fact that import prices in this area have been rising at an even faster clip. In any event, boosts hit such diverse product lines as heavy motor trucks, metal working machinery, oil and gas field equipment, textile machinery, and motors and generators.

Paper products also continued to move up—as increases were posted in paper, paperboard, office supplies, and paper boxes and shipping containers.

Textiles exhibited a similar pattern—with increases hitting both grey fabrics and synthetic fibers. All in all, textile mill product averages are now running better than 5% better than year-earlier levels.

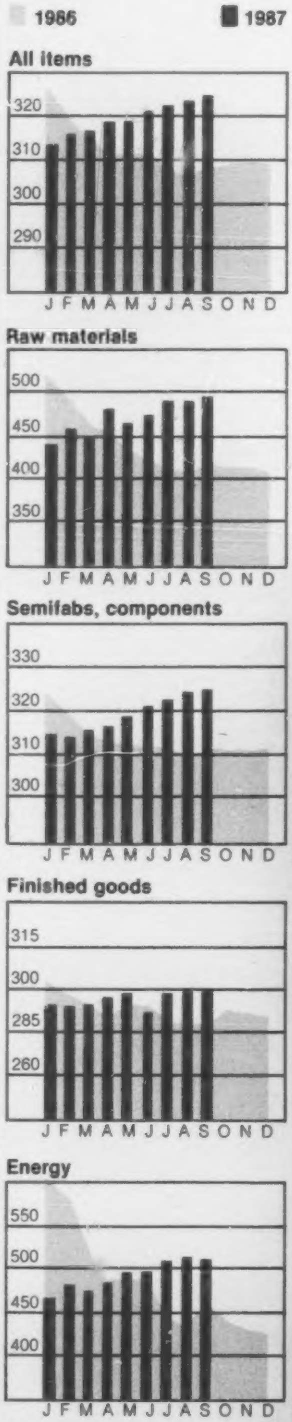
Metals, too, remained firm—as increases were posted in the steel, aluminum, copper, cadmium, titanium, and steel scrap sectors. But there was

This month's breakdown

	Latest level (September)	% change from: Month ago	Year ago
Bearings	358.1	0.3	0.4
Bolts, nuts, etc.	278.7	−0.1	0.5
Chemicals, inorganic	292.7	0	−0.7
Chemicals, organic	353.1	−0.1	8.9
Concrete products	325.8	−0.2	0.3
Corrugated cartons	NA	NA	NA
Cutting tools, small	293.2	0	0.3
Electric lamps (bulbs)	352.9	−0.1	1.8
Electronic components	202.1	−0.8	−0.4
Fans and blowers	371.2	−0.1	1.5
Foundry and forge products	366.1	0.2	1.2
Fuel oil (residual)	646.6	−10.4	54.3
Furniture, commercial	327.9	0.2	3.0
Gasoline	408.7	−4.8	20.7
Glass, flat	238.3	0	2.5
Glass containers	401.3	−0.2	−0.2
Gypsum products	303.5	−1.7	−11.0
Hand tools	397.0	0.1	3.4
Hand tools, power driven	242.2	0.2	1.2
Industrial furnaces	402.4	0	1.7
Integrating and measuring instruments	240.5	−0.2	1.4
Internal combustion engines	358.4	−0.3	2.0
Lubricating oil	343.7	−0.4	−4.0
Lumber, millwork	332.8	0.2	3.5
Material handling equipment	299.9	0.3	0.9
Metal containers	360.7	0.6	−0.5
Metal mill shapes (nonferrous)	329.1	1.3	9.8
Metal tanks	304.8	0.7	2.2
Motors and generators	359.8	0.7	1.9
Motor trucks	308.1	−4.6	4.5
Office and store equipment	159.7	0.4	3.2
Paperboard	308.5	2.6	12.2
Paper boxes and shipping containers	291.8	1.4	7.0
Paper office supplies	242.5	0.7	1.8
Paint	284.7	0	0.8
Plastic resins	324.4	0.9	11.8
Precision measuring tools	278.4	0	3.2
Pumps and compressors	365.3	0	0.6
Refractories	375.2	0	0.8
Rubber belts and belting	328.3	0.2	−2.7
Scales and balances	235.4	0.4	1.2
Steel products	355.8	0.4	1.9
Switchgear	292.1	0.5	2.3
Textiles, synthetic fibers	149.2	0.5	−0.1
Textiles, gray fabrics	159.6	1.5	6.8
Tires and tubes	232.2	−0.1	−0.5
Transformers and power regulators	240.6	0.2	2.6
Welding equipment	305.1	0.2	1.1
Wire and cable	221.4	1.7	7.5

Industrial prices

(Index: 1967 = 100)



Source: Bureau of Labor Statistics

some offset here, notably in zinc, as previously struck facilities came back into production.

Chemicals and allied products were more mixed. Thus while organic and inorganic chemicals remained basically unchanged, plastics continued to rise—to the point where average resin tags are now running 12% above year ago levels.

Similar up and down movements hit the building materials sector. On the upside were lumber, plywood, sheet metal products, and nonferrous wire and cable. But offsetting these to some extent were declines in insulation material, gypsum, and structural clay products.

STEEL SCENE

A suprising shift

Earlier steel buoyancy is persisting into the final three months of the year—and could well spill over into early 1988.

Behind the shift to a basically sellers' market: a combination of factors including USX's slow production comeback after a long strike, some capacity rationalization, a modest drop-off in imports, and better than anticipated demand.

The latter is perhaps best characterized by the upbeat near-term estimates being given by both PMs and distributors. On the buying front, for example, some 25% of queried NAPM steel survey respondents expect to increase their intake of the metal over the next three months.

More important, those anticipating increases have been outweighing those planning on cutbacks by a close to 2:1 margin for two months running.

Distributors responding to the latest Steel Service Center Institute (SSCI) survey tell a similar story—with those expecting increases now far outnumbering those looking for a drop-off in near-term business.

Service centers also note smaller inventories. More to the point, some 64% believe that stock levels are about right compared to current shipments.

The stock levels reported by these distributors average out near a 3.1 month level. SSCI President Andrew Sharkey puts this into perspective, noting that this number is well below two and one year ago when the comparable inventory readings were 3.44 and 3.64 months, respectively.

Sharkey adds "the declines in inventory, although varying widely from company to company, are a reflection of current difficulties in finding some steel products, as well as concern about the rapid escalation in replacement costs." And these replacement costs

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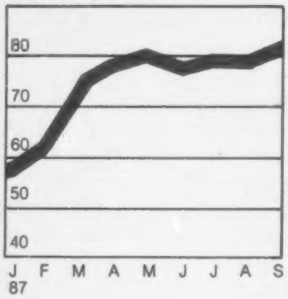
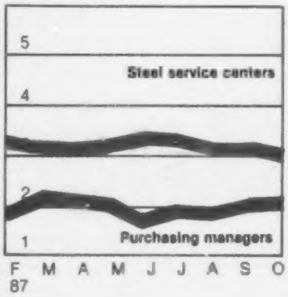
BUSINESS DATATRAK

Steel

Operating rates

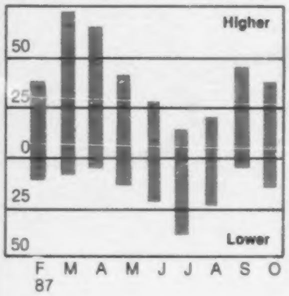


Inventories
(Months supply on hand)

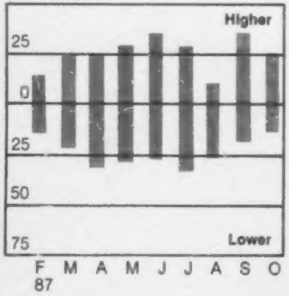


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)

Steel buyers

ABOVE 29%
SAME 53%
SLIGHTLY BELOW 18%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 6%
SAME 79%
5-10% BELOW 13%
10-20% BELOW 2%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

are expected to continue rising. Thus 21% of members polled said that replacement costs six months from now will be more than 5% above current replacement costs.

Much of this, of course, stems from the absence of foreign competition. Only 15% of the service centers now note lower foreign carbon steel prices—about half the 28% figure of this past March. And of this 15%, only 2% put the price break in excess of 10%.

A similar pattern is noted in stainless where none of the 23% who still report lower overseas prices put the advantage in excess of 10%. Contrast that to a year ago when virtually everybody was reporting lower prices.

The implication is clear: The weakening dollar has pretty much eliminated the advantage of going overseas. This also shows up in another finding—one that notes that two out of every three foreign suppliers are now less active in seeking new business.

More important, this import decline—combined with good demand and more capacity cutbacks—is making for an increasingly snug market and longer lead times.

If there's any doubt about this, take a look at the latest steel buyer supply assessment for the next six months. As of now, some 70% expect some headaches—in sharp contrast to the virtually problem-free assessment of just one and a half years ago.

Biggest concerns seem to be centered in plate, hot-rolled sheet, cold-rolled sheet, and coated sheet. But a few are also worried about structurals, rod and wire, heat-treated products, and even stainless.

PROCUREMENT STATUS

Leadtimes tightening up

Better-than-expected fourth quarter production activity is putting a bit of pressure on leadtimes.

Steel has probably been the hardest hit, with several product lines reporting snugness. A few plastic resins are also somewhat harder to find.

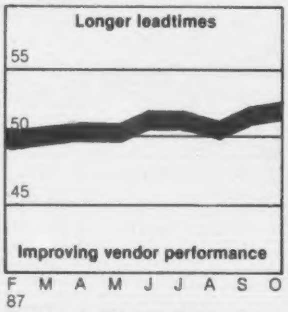
On the other hand, nonferrous metal availability—most notably for zinc and lead—has improved with the ending of work stoppages. And even the current copper tightness seems manageable, with no one forced to do without the metal. Elsewhere, electronic components present a mixed picture.

But as suggested above, the net effect has been a

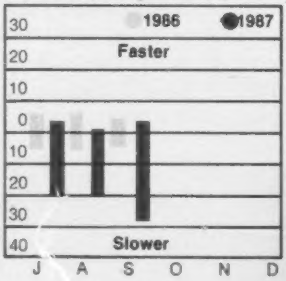
Monthly procurement status report

Leadtime index

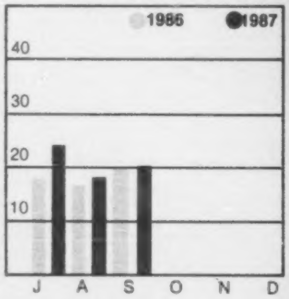
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



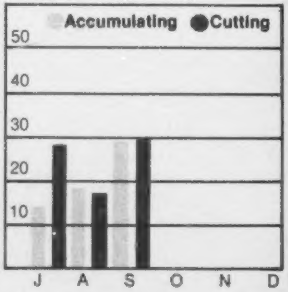
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

modest tightening up, with the number of leadtime extensions outpacing shrinkages. Upshot: *PW*'s exclusive leadtime index is again above the neutral 50 mark (at 52) for the second straight month.

Further confirmation of a slow drift away from a buyers' market comes from the NAPM Business Survey Committee where a significant 28% report delivery slowdowns—far more than the minuscule 4% who are getting things somewhat faster.

Meantime, these delivery uncertainties—combined with increasing production—have just about ended earlier inventory paring.

Nevertheless, no one seems about to push the panic button. Any near-term production advances will be modest and because to some extent these advances will be offset by new capacity. Thus while output may increase by as much as 4% at annual rate over the next few months, the increase in new production potential (2-3%) should be almost as great.

Not surprising then, PMs are still taking a conservative ordering stance. Indeed, an impressive 58% say they are still buying production materials on either a hand-to-mouth or 30-day basis—actually above the 55% average figures noted for the previous two months.

Leadtimes and availability

Chicago: Electronic leads have come to these weekly levels: Capacitors (12-16), MOS semiconductor (13-20), and integrated circuits (ICs—12-16). Also down: Offset paper.

Cleveland: Waterproof papers take about 4-5 weeks. Ditto, multiwall types. Corrugated is available in 2-3. No problems with softwood lumber and skids (1-3), alloying materials, polyvinyl chlorides, and paints (2-3), and cold-finish aluminum, 8.

Los Angeles: Typical prevailing leads (in weeks): Galvanized steel (12-14), grey iron castings (6-8), brass castings and standard valves (10-12), pumps (11-12), domestic fasteners (7-9), aluminum bar and sheet, lube oils, and steel strapping (2), linear ICs (30).

Houston: Field fabricated pressure vessels still take 8-18 months. Some extensions are noted for shop-fabricated towers and drums (6-7 months). No changes in plastic resins (8 weeks), stainless steel fasteners (2-4), and galvanized steel coils (18).

Philadelphia: Transistors are a bit tighter, but still at 6 weeks. Moving up to these new higher levels are surface mount resistors and capacitors, and double and multilayer printed circuit boards (10-12).

Pittsburgh: Pretty much status quo—with these average waits reported (in weeks): paper bags (4-6), corrugated boxes (3-4), wirebound boxes (4-5), drums, (1), waterproof papers (8), plastic packaging, steel strapping and most alloying metals (2-3).

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BUSINESS DATATRAK

Leadtimes (in weeks)

	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	11	11	8
Plate (Phil)	10	10	3½
Plate (Chgo)	13½	13½	4
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	11	11	6½
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	12	12
Structurals (Chgo)	5	5	4½
Structurals (Hous)	11	11	11
Tubing (Phil)	8½	8½	5½
Grey Iron Castings (LA)	7	7	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	14	16	16
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	4½	4½	4½
Motors (Phil)	12	9	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10

	Now	Month ago	Six months ago
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	2½
Plywood (Chgo)	5	5	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅛	⅛	⅛
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	2	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3

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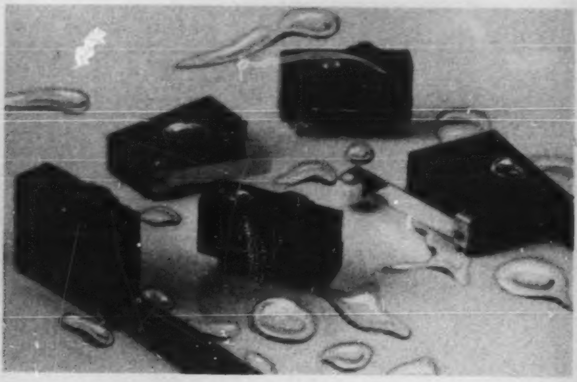

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	Now	Month ago	Six months ago
Shrink Film (Chgo)	6	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	½
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	22	22	13
Aluminum Plate (Chgo)	14	14	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	22	22	13
Brass Castings (LA)	9	9	9
Brass Rods (Chgo)	7½	7½	9
Brass Sheet (Chgo)	11	11	6
Brass Tube (Chgo)	8½	13	17
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6

	Now	Month ago	Six months ago
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	3	3	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	4	4	2
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	50	50	50
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	8	8	8
Fasteners, Std. (Phil)	3	3	3
Heat Exchangers, Carbon-alloy Steel (Hous)	22	22	21
Heat Exchangers, Hi-pressure (Hous)	25	25	24
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	21	21	21
Pumps (LA)	11½	11½	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	4	4	4
Welding Supplies (Hous)	5	5	5

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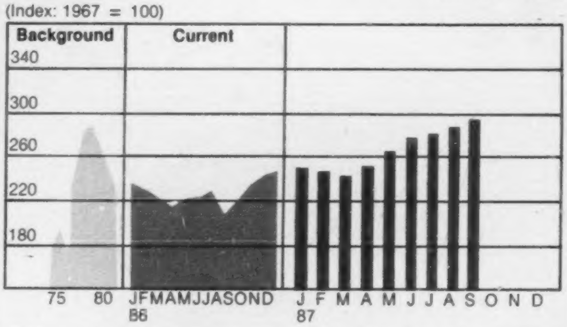
BUSINESS DATATRAK

Raw material price barometer

Latest month 292.5
Month before 288.3
Year ago 221.2



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	23.95
Steel, bars, Pitts., cwt.	16.50	16.50	23.95
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	31.00
Steel, plates, Pitts., cwt.	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	26.90	26.90	25.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.835	.780	.555
Antimony, N.Y., dealer, lb.	1.12	1.12	1.12
Beryllium-copper, cost ingot, lb.	5.90	5.65	5.65
Brass, red, 85%, [sheet], lb.	1.50	1.45	1.29
Brass, yellow, [sheet], lb.	1.45	1.40	1.24
Cadmium, N.Y., dealer, lb.	2.25	2.20	1.07
Copper, electrolytic, wire bars, refd., lb.	.86	.81	.65
Copper sheet, over 24 in., lb.	1.59	1.54	1.38
Lead, common, N.Y., lb.	.42	.42	.24
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	355.00	330.00	178.00
Molybdenum, oxide, dealer, lb.	2.92	3.02	3.15
Nickel, cathode, dealer, lb.	2.48	2.50	1.74
Platinum, dealer, oz.	567.00	600.00	604.00
Silver, N.Y., oz.	7.56	7.56	5.71
Tin, N.Y., dealer, lb.	3.15	3.17	2.58
Zinc, Prime West, East St. Louis, lb.	.42	.43	.44
Zinc, die casting alloy, No. 3, lb.	.47	.485	.505
PAPER			
Uncoated book #3 offset, ton	860.00	860.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	16.98	17.01	16.34
Shipping sacks, ton	410.00	390.00	390.00
Solid bleached paperboard, ton	620.00	620.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	380.00	350.00	320.00
TEXTILES			
Burlap, 10 oz., 40″, N.Y., yd.	.246	.236	.218
Cotton drill, 1.85, 59″, 68x49, N.Y., yd.	1.24	1.22	1.03
Cotton middling, 1″, N.Y., lb.	.654	.682	.398
Printcloth, 48″, 80x80, N.Y., spot. yd.	0.95	0.95	0.82
Army duck, 37″, 13 oz., yd.	1.510	1.495	1.450
Blended printcloth, 64″, 78x54, yd.	.95	.92	.78
20s combed yarns	2.03	2.03	1.74
Wool 64s, Staple, lb.	2.90	3.00	1.90

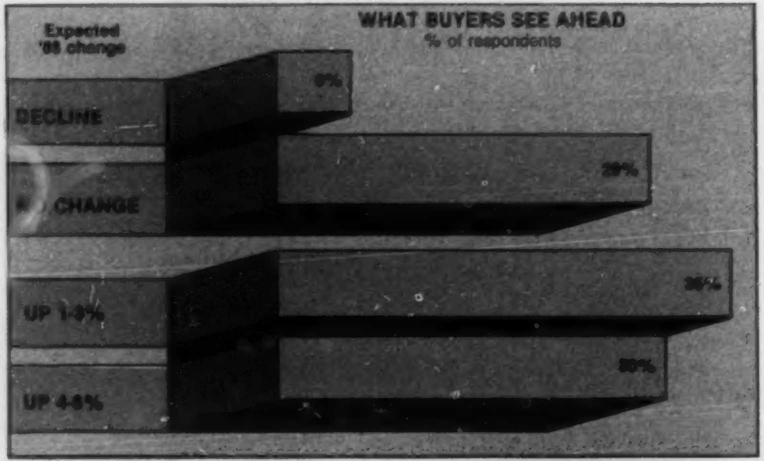
	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	105.00	105.00	80.00
Benzene, petroleum, tanks, Houston, gal.	0.92	0.93	0.81
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.81	.81	.91
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.32	.32	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.320	.295	.270
Polyethylene resin, low density liner film grade (market place), lb.	.345	.345	.255
Polypropylene, homopolymer grade (market price), lb.	.440	.440	.320
Polystyrene, general purpose grade (market price), lb.	.520	.520	.330
Polyvinyl chloride, pipe grade (market price), lb.	.365	.360	.275
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.40	.38	.22
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.800	.770	.770
Xylene tanks, gal.	.750	.780	.800
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	338.90	329.60	332.65
Lumber 2x2 pine, mbf, cl	334.45	335.95	315.20
Plywood, plyform, ¾″, msf, cl	584.60	580.65	592.90
Plywood, ⅝″, msf, cl	391.00	385.95	390.10
Cement, bulk, ton, tl	63.73	64.25	63.43
Sand, ton, cl	7.14	7.21	6.62
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	49.13	49.08	45.96
Crushed stone, 1½″, ton, cl	8.32	8.30	7.83
Concrete blocks, sand/gravel, 8″x8″x16″, ea., tl	0.90	0.90	0.82
Gypsum sheathing, ½″x1″x8″, msf, tl	228.46	228.23	215.07
Brick, common, per thousand, tl	198.26	198.26	186.01
Asphalt paving, AC-20	139.34	137.59	136.69
Concrete sewer pipe, 12″, prem. joint, per foot, cl	7.50	7.50	7.36
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	15.25	15.50	11.00
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	19.00	.18.00	14.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.588	.565	.360
Gasoline, 94 oct., reg., Chi., tank car, gal.	.538	.541	.415
Heating oil, No. 2, Chi., bulk, gal.	.555	.530	.411
Heating oil, No. 2, N.Y., bulk, gal.	.603	.503	.420
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.555	.510	.418
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.260	.245	.240
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	114.00	94.00	76.00
Steel, No. 1 hvy., dlvd., Chi., ton	115.00	90.00	70.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.785	.730	.545
Copper, No. 2, East, wholesale buy, dlvd., lb.	.700	.650	.465
Brass, red, East, wholesale buy, dlvd., lb.	.745	.690	.505
Brass, yellow, East, wholesale buy, dlvd., lb.	.365	.365	.310
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.510	.495	.340
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.575	.560	.360
Zinc, old, East, wholesale buy, dlvd., lb.	.200	.200	.170
Lead, clean solids, East, wholesale buy, dlvd., lb.	.275	.275	.140
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	35.00	40.00	25.00
Paper, old corrug. box, dlr., N.Y., ton	20.00	25.00	23.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.23	.23	.11

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Survey of the month

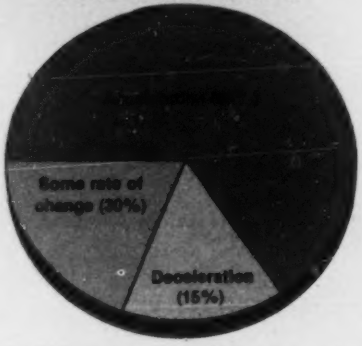
Shipper discounts to stay

Freight rate trends into 1989



Source: PurchasingWorld

A COMPARISON WITH '87



There may be a modest increase in freight costs in the offing, but most of the transportation buyers responding to *Purchasing-World*'s new nationwide survey aren't all that worried.

While few respondents see a repeat of the current year when rate wars actually brought on overall rate declines, the general feeling is that increases in 1988 will be modest.

Discounting is also expected to remain a way of life. As one shipper notes, "We've still got plenty of bargaining leverage. Negotiations may start from a slightly higher base but reductions off list should remain impressive—especially in the trucking area."

Behind the continuing optimism are lingering overcapacity, intra- and intermodal competitive infighting, and better management of both incoming and outgoing shipments. That's not to say that anyone is complacent. Carrier service, for example, still presents some problems—and there's a lot more to be done to minimize cost and maximize efficiency.

Here's a detailed rundown on how shippers rate the current transportation situation—and what they see for the quarters immediately ahead.

- **Current situation:** It has been a surprisingly good year as more than half of those queried report either no overall increase or some modest decline. And more than nine in ten say they are getting discounts—of as much as 40-45% off official tariffs.

These discounts are said to be especially prevalent in the less-than-truckload (LTL) sector. It's not surprising that nearly half of those using LTL say current costs have dipped below those of a year ago.

Shading is also occurring in the truckload (TL) area. But most respondents say that really massive off-list buys are a lot harder to find here. They do still contend, however, that shopping around and hard-nosed bargaining can still pay off.

- **Rates into 1988:** The modest increases anticipated are highlighted by the fact that while roughly two-thirds of survey respondents expect to pay a bit more next year, not a single one says the boosts will be more than 6%. More significant, the average increase is only expected to be 3-4%.

Also worth noting: Increases will be evenly spread out around LTL, truckload, rail, barge, and air cargo areas. Truckers, for example, are now in the process of pushing for a 3.5% LTL boost for the fourth quarter 1987—and at least part of it is expected to hold.

- **Contractual agreements:** About 40% of queried transportation buyers say they are putting more emphasis on contractual pacts. For some of these firms, anywhere from 75-100% of all shipments are already under such pacts. The savings can vary but several respondents put breaks as high as 25-50%.

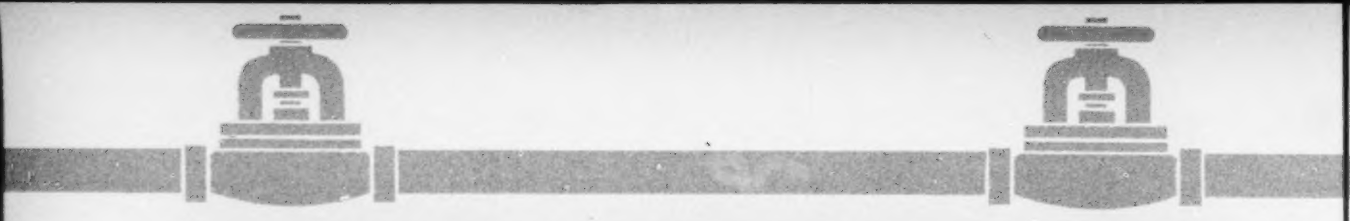
Some buyers also say they are using specialists such as brokers, shipping associations, and agents—and savings are said to run anywhere from 2-20%.

- **Area of responsibility:** The majority of purchasing professionals say they are in charge of outbound and inbound freight. Seven out of ten also say they are responsible for negotiating transportation contracts.
- **Carrier performance:** The general feeling is that service is "good" rather than "excellent." Some of the problems noted include difficulty in tracing shipments, carrier bankruptcy, consistency, damaged goods, on-time deliveries, and a possible shortage of qualified drivers.

On the latter point, Jim Piecherowski, corporate transportation manager of Miles Inc., Elkhart, IN, notes that "Our main concern in 1988 will be the availability of good drivers. We feel that the push for road safety and national licensing (both of which are certainly needed and good for the industry) will deplete the available pool of labor and translate into additional cost."

In order to prepare for this, Miles is positioning itself with truckload carriers who maintain their own labor forces rather than depend on the casual market.

Other strategies to insure reliable, cheap service include 1)consolidation of carriers, 2) multi- year fixed agreements, and 3) working with manufacturing and marketing to upgrade shipping modes (such as LTL into full truckload shipments).



Buying gas for less

Your company's gas bill, like other bills, comes in, gets checked over and paid. And it probably doesn't get a second thought.

But what if there were a way to buy the natural gas your business needs and cut the cost by as much as 40%? And not cause any additional headaches, or require extra manpower?

Too good to be true? Not according to David Doctor, president of EnTrade Corp., Louisville, KY. Assisting companies that want to buy gas on the spot market and move it over the nation's pipeline system is his business—and it's a growing business.

And it's happening

One company which has used EnTrade's help to take advantage of the spot market is TRW. Jonathan Stegner, manager of purchasing, has a special assignment on this cost reduction project to consult with TRW plant locations on reducing costs through natural gas buying. Recently he spoke with ***PurchasingWorld*** about his company's experience.

According to Stegner, TRW buys gas at the wellhead and arranges for its transportation on a plant-by-plant basis. This method, in use for a little more than a year, is saving the company about 20%—the target set when TRW first went into the project.

Is it convenient to buy this way? Stegner says that there is a little added burden for purchasing, there are a couple more invoices to read and justify—depending on how many suppliers are involved—but there has been no increase in manpower, and he recommends it strongly to the TRW plants which come to him for advice on gas purchasing.

Transportation as a portion of total interstate gas deliveries

Year	Transportation as a percentage of total interstate deliveries	Total interstate deliveries (TCF/Annum)
1982	3%	13.7
1983	5%	13.6
1984	9%	13.2
1985	17%	12.7
1986/2Q	41%	—

It's still a new market, still learning to respond to user needs, Stegner says. And he feels that companies like EnTrade, which survive the inevitable shakeout in new business areas, will probably do so based on their responsiveness to the market.

Acceptance around TRW has been very good, he says. The large plants were already well aware of their energy costs, but smaller ones, (30,000+ MCF users) were not necessarily aware of how much could be saved.

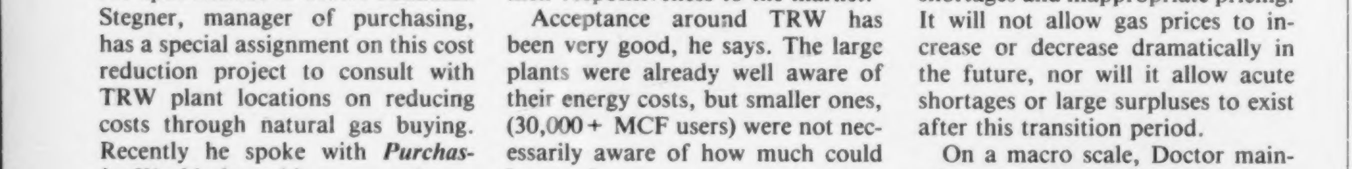
See it grow

As the chart shows, the amount of transportation (of spot market gas) as a percentage of total interstate deliveries is growing rapidly, while the total of interstate deliveries is declining slightly. Further proof is found in this example: Early last summer, transportation services opened to the California markets. Competition was fierce for the large markets. Prices, which had been slightly higher than the rest of the nation's, decreased rapidly. When the wellhead prices in the West Texas and Oklahoma panhandle area which served California fell below the prices being realized in Midwest markets, a certain amount of gas was redirected to those markets. This pushed prices down in the Midwest, causing a drop in prices in Louisiana, which also serves the Midwest. The Louisiana production area also serves the eastern markets, and as a result, the price cut initiated on the West Coast rippled all the way to the east in less than two weeks.

And the good news is...

Doctor says that at least in the near term, "you will always be able to acquire the amount of gas for which you are willing to pay." He also maintains that the spot market's rise will do away with shortages and inappropriate pricing. It will not allow gas prices to increase or decrease dramatically in the future, nor will it allow acute shortages or large surpluses to exist after this transition period.

On a macro scale, Doctor maintains, the spot market will assure that supply, demand, and price can achieve the right balance at any particular time. The spot market is flourishing today because low prices associated with a large surplus are attracting many to participate. If it is to continue, he says, a structure must be developed to reliably provide information to and ease of operation for all participants. The marketing, transportation, law, and supply staffs have done their work—now it's up to the operations and accounting people to provide the base for continuing operation.



A little history

What is the spot market? How did it develop and where will it go from here? According to David Doctor, president of EnTrade, a company which specializes in aiding industrial firms in buying gas on the spot market and moving it over the existing pipeline system, the term spot market covers almost all the transactions not made under a pipeline's sale tariff. (Tariff transactions are the ones we're most familiar with.) Spot transactions are basically point-to-point transactions in which a single producer or groups of producers deliver gas for a particular customer's needs.

To understand the spot market, Doctor says, it's necessary to understand some history. Around the turn of the century, when oil was being discovered in commercially marketable quantities, natural gas was flared off as a waste product; pure gas wells were were capped. By the early 1900s, natural gas was replacing gas produced from coal. By the 1920s, natural gas could be produced in commercially marketable quantities.

In the late 1920s and 1930s pipelines pushed across the United States from mid-continent and Gulf Coast production areas to the Midwest and Northeast metropolitan markets. In 1938, the Natural Gas Act placed interstate natural gas pipelines under the regulation of the newly formed Federal Power Commission.

A 1954 Supreme Court ruling extended the Federal Power Commission's jurisdiction to fixing the wellhead price of gas. The quadrupling of gas prices in the 1970s gave gas producing companies incentives to divert their attention to development of domestic oil. By the mid-1970s, the swing in supply/demand balance was being felt.

The Natural Gas Policy Act of 1978 established a new plan: Prices for gas produced before 1978 remained low, but gas produced after 1978 brought higher prices and annual price hikes. This renewed incentives for the production of natural gas for interstate markets.

Rising consumer prices brought conservation, a search for alternate fuels, and reduced demand. According to the American Gas Association, the surplus of natural gas in this country is now approximately 2.5 trillion cubic feet (TCF).

This combined action of consumers and suppliers brought about today's spot market and, Doctor says, will eventually lead to the self-regulation of prices and supply in the natural gas industry.

Transportation rules, too

The Natural Gas Policy of 1978 included transportation regulations and provided specific authority for intrastate pipelines and local distribution companies to arrange for transportation on the interstate pipeline systems. In 1979, further orders allowed industrial users to purchase and have their own gas transported.

Even so, some industries were employing conservation measures, closing plants, and even relocating to areas where natural gas costs were lower. The third essential ingredient for the spot market to develop was the pipelines' willingness to provide transportation service.

Mounting supply surpluses and unhappy producers on the one end of the pipeline and increasing prices and unhappy customers on the other end caused many interstate pipelines to voluntarily institute transportation programs. Then in 1985, the Federal Energy Regulatory Commission issued Order 436, which formalized all previous experimental programs and allowed any party to transport natural gas on an interstate pipeline, providing the pipeline voluntarily adopted the provisions. Most pipelines have adopted the provisions, leaving the way clear for the operation and maintenance of a viable spot market. **Circle 243** **PW**

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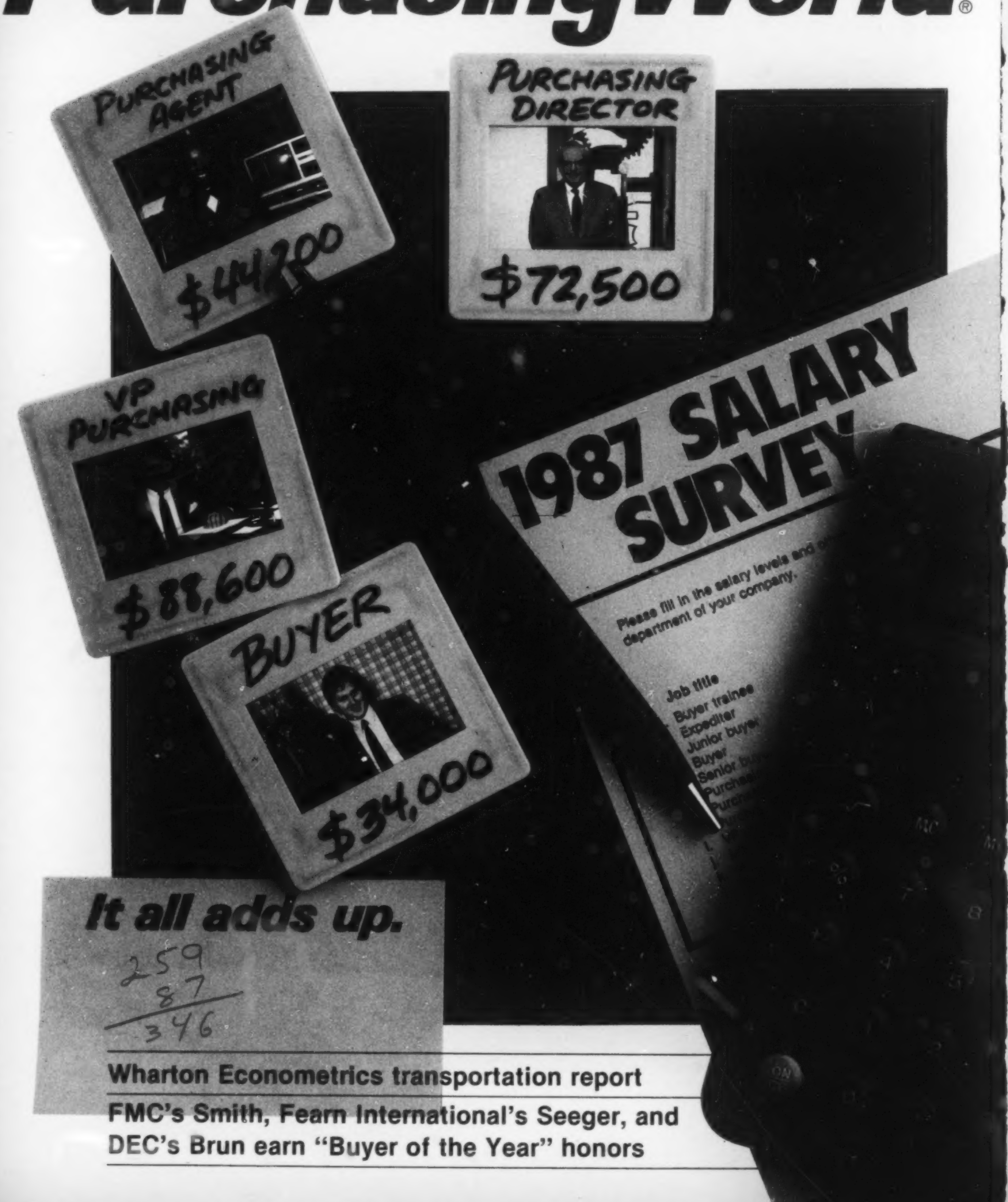
PURCHASING AGENT
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PURCHASING DIRECTOR
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VP PURCHASING
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BUYER
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1987 SALARY SURVEY
Please fill in the salary levels and o
department of your company.
Job title
Buyer trainee
Expediter
Junior buye
Buyer
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It all adds up.

Wharton Econometrics transportation report

FMC's Smith, Fearn International's Seeger, and DEC's Brun earn "Buyer of the Year" honors

PurchasingWorld®

Helping you manage the business of buying

December 1987 Vol. 31 No. 12

Special report: 1987 Salary Survey

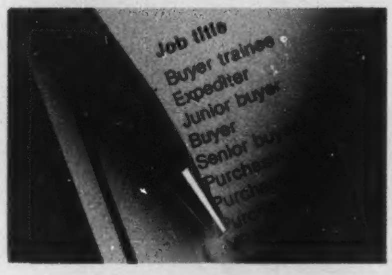
37 The salary scene: It all adds up
The results of our 1987 survey show purchasing salaries up, along with an increase in the number of women in the profession (now more than 40%). But there are some surprises, too.

46 Buyer of the Year winners
The winners of our annual buyer of the year competition all point up the value of watching the basics and taking initiative:

In Division I, ***Eileen Smith of FMC Corp.*** exceeded a corporate goal of 5% cost reduction by double in one case, dropping unnecessary bolt specifications for major savings. Smith also found that company growth gave greater leverage in gas buying, cutting costs by more than half in that area.

In Division II, ***Bill Seeger of Fearn International,*** used his materials handling background to save time and money (and warehousing space) in handling packaging materials, as well as hanging tough in negotiations for cost avoidance.

Peggy Brun of Digital won Division III with her pioneering work in energy saving lighting for the plant as well as saving money in chemicals buying for water treatment—with corporate-wide results.



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Anyone doing business internationally, whether buying or selling, will probably be operating under this new law—the United Nations Convention on Contracts for the International Sales of Goods.

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The many ways to make, store and retrieve copies of documents are detailed in this primer on imaging systems.

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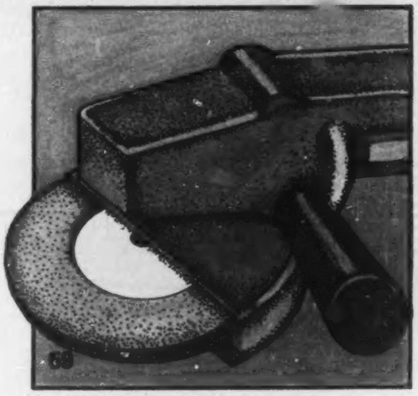
Technological improvements have increased product life, thus making buyers and users happier but decreasing the unit sales potential for suppliers.

Photography by Paul Silla, Design Photography, Cleveland, OH



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PW PREDICTS

Robert S. Reichard, executive editor

Stock market's October tumble helps slow price increases

Figure on smaller price increases in 1988 as the impact of the mid-October stock market tumble reverberates through the economy.

Psychological factors will undoubtedly play a role in this price slowdown. Much of it will be due to a more subdued GNP growth curve than was expected last quarter. One survey of 35 leading economists puts the first half growth rate at only a 1.4% annual rate.

If true, it means billions of dollars less in purchases and substantially reduced demand/pull pressure on prices. How much price inflation? The same people see the consumer price index decelerating by about one percentage point over the next six months—from a 4.8% projected annual rate.

A similar pattern is anticipated in industrial producer prices, a yardstick of more immediate concern to *PW* readers. As recently as early this fall, most econometric models were predicting a 4-5% increase in overall industrial product prices for 1988. Now the consensus is as low as 3-3.5%

There's strong evidence that these lower rates will materialize: Sensitive commodity prices have already begun to top out after almost a year of virtually uninterrupted advances. It makes a lot of sense, as projections for smaller gains impact on steel, nonferrous metals, chemicals, textiles, and oil. ($20/barrel oil quotes have gone down to $18-19/barrel.)

Even before the stock market tumble, fears of a raw material price spiral were overdone. Wharton Econometrics, writing just before the crash, observed, "Commodity price rises are not sustainable given the excess supply in most markets...oil and other raw materials prices are expected to remain more or less flat over the next couple of years."

The anti-inflation evidence on the cost/push front is also encouraging. A recent Bureau of National Affairs survey of 215 firms finds nearly 75% seeking to limit 1988 first year wage increases to 2.4%. Labor Department numbers for the first nine months of 1987 show that the cost of newly-inked pacts during their first 12 month span reflects only a 2.1% increase.

Increases over subsequent years are higher, but it's doubtful overall pay costs will rise more than 4% in 1988. Even this is an exaggeration, especially in manufacturing. Productivity has been rising almost as fast. It suggests little or no near-term increase in unit labor costs for American-produced goods.

The somewhat lower interest rates envisioned after the stock market debacle also have to be considered a positive sign as far as prices are concerned. Even a one percentage point decline in the prime rate could substantially reduce inventory carrying charges and other business costs.

Finally, take a look at gold and platinum. These elements traditionally have been the first to rise when big price advances are feared. Their recent performance has been down—significant evidence that the smart money is still betting on price stability.

Import prices

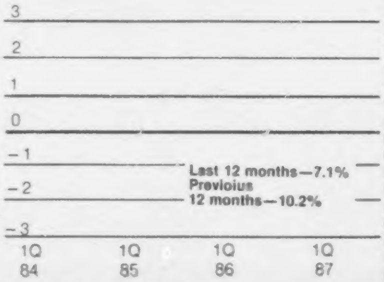
Import price increases are slowing down—with Uncle Sam's latest index for all incoming shipment (except fuel) advancing only 1.3% over the latest (third quarter 1987) period. That's only about half the 2.5% average quarterly gains noted during the first six months of the year.

A more detailed rundown of latest quarterly changes follows:

- **Crude materials:** Averages here were up 2.8%—the third straight quarter of significant increase. The biggest jump occurred in wood (up 6.4%), crude rubber was up nearly 6%—with smaller gains registered for pulp and wastepaper (1.0%), and metal ores and scrap (2.9%).
- **Chemicals:** Third quarter prices edged up 0.8% after increasing 6.0% in the previous six months. Much of the current deceleration can be traced to an 8.6% drop in hydrocarbon tags (primarily benzene). In contrast, manufactured fertilizers jumped a resounding 18.2%.
- **Intermediate manufactured products:** Quotes here jumped 3.7%. Pacing the advance were nonferrous metals (up 7.3%), and paper and products (up 6.1%). Other groups which posted large increases for the second consecutive quarter included 1) wood manufacture and 2) iron and steel (both rising 3.9%).
- **Machinery and transport equipment:** Prices rose only 0.2%—the smallest quarterly increase since March 1985. Only one category—-metalworking machinery (up 2.8% on the strength of a jump in parts prices)—reported a gain of over 0.4%.

Import prices: the increases slow down

Overall (ex. fuel)
(% increase over previous quarters)



Product by product
(% increase over last 3 months)

Textiles	1.7
Steel bars, rods, shapes	1.9
Fasteners	2.2
Tools	0.8
Elec. motors and gener.	0.4
Textile mchy	2.6
Printing mchy.	1.2
Metalworking mchy	2.8
Heating and cooling eqpt.	0.9
Pump & compressors	1.0
Mechanical hand eqpt	0.6
Bearings	1.0
Office mchy	0.4
Elec. mchy	0.6
Autos	0.3
Electronic compon.	1.1

Source: Bureau of Labor Statistics

Electronics industry

Strong 1987 electronics industry demand shows every sign of continuing into next year.

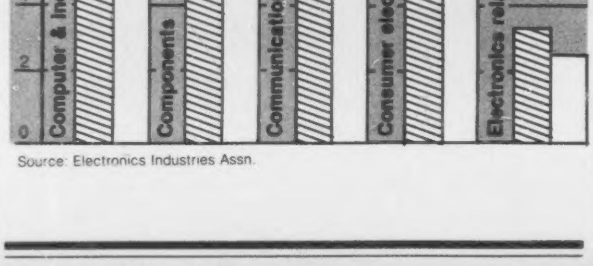
Indeed, if a new Electronics Industries Association projection is correct, 1988 could actually top current performance. The trade group, for example, sees next year's U.S. sales jumping 6.2% (to $238 billion) compared to the 5.3% estimated advance for 1987.

Credit the gain to strong demand in virtually all key sectors. The big "computer and industry" segment (one third of total sales), for example should be up 5.5% over the next 12 months—thanks to increased sales of personal computers and enhancements to small computers. Only machine tools (hard hit by foreign competition) will remain a disappointment in this area.

Meantime, the strong PC market should make for a big 10% double-digit increase in component part sales next year—on top of this year's substantial 6.5% gain. Semiconductors will lead the advance. But demand for passive components will remain rather modest.

The communication electronics market also remains buoyant as a projected 7.0% increase follows this year's estimated 4.5% advance. True, there has been some slowdown in military orders in recent months, but this should be more than offset by growing sales of commercial gear.

Consumer electronics, where a 5.5% gain is expected to follow a 7.1% increase, isn't any laggard either. On the other hand, the catchall "electronics-related products and services" segment (an area including aerospace and auto electronics as well as office machines) will show more subdued increases—about 3.3% this year, with 2.5% gain targeted for 1988.

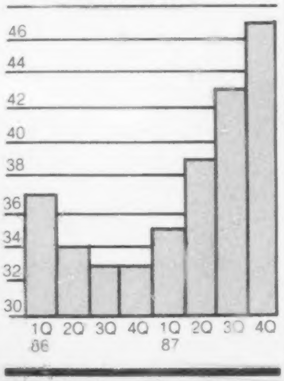


Source: Electronics Industries Assn.

Polypropylene

The popular commodity plastic is riding high. While only 3¢/lb of a recent 5¢/lb boost has held, the resin (homopolymer grade) now commands 46-48¢/lb—a hefty 15¢/lb jump over last December's levels. Behind the increase: Strong exports, rising propylene costs, and snug supply/demand balance. On the last point, shipments have jumped 10% this year (to 6.4 billion lb) pushing the industry operating rates above the 95% level. Nor is the supply situation likely to change in 1988—as another 8-10% demand gain virtually wipes out the positive impact of an 11% boost in capacity. Because of an expected leveling off in feedstock costs, any further boosts are likely to be quite modest.

Polypropylene prices
(Homopolymer grade)
(Transaction price ¢/lb.)



Zinc

The plating and alloying metal is trying to hold onto its recent price advances. But some erosion can't be ruled out as previously strike-interrupted production comes into the market. Also new production is coming onstream in Brazil and elsewhere. Recent forecasts call for a 2% increase in 1988 consumption. But that may be on the optimistic side as the stock market slide reduces end use demand in the big auto and construction markets. In any event, *PW* equations suggest it may be hard for producers to maintain current price levels—with tags perhaps dropping under the 40¢/lb level by early next year.

Keyboards

Standardization is hitting the big keyboard market, with customized models giving way to less expensive off-the-shelf units. These commodity keyboards can easily reduce costs from $10-20 per unit. Prices continue to come down as high-volume deals move at around 50¢/key; a 101-key model sells for around $50. Another plus for standardization: the desire to have a common design on various pieces of hardware. Also worth noting: Hard contact keyboards (traditionally favored because of their low prices) as well as newer membrane-based capacitance, contact membrane, and rubber keyboards are all now in about the same price range.

Die castings

Two good back-to-back demand years, that's what the American Die Casting Institute (ADCI) is projecting—as this year's 6.0% dollar sales gain is followed in 1988 by an even bigger 6.4% advance. Equally significant, the trend towards the production of more complicated and multifunctional components is continuing. Another trend worth noting: Strong firms are becoming stronger while the weaker ones merge unless they have a special market niche. ADCI also provides estimates suggesting mixed 1988 real growth. Thus the projected consumption gains: Aluminum—5% increase to 512,000 tons; zinc—a 6% decline to 164,000 tons, and magnesium—5% increase to 11,000 tons.

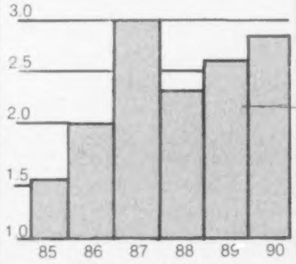
Office and industrial vacancies

There are still some good buys out there—despite some leveling off in vacancy rates. On the office front, for example, the latest 16.2% and 23.0% figures for downtown and suburban locations remain pretty much near recent peaks. In some center cities the figures are a lot higher than the 16.2% average. Examples: Dallas (24.6%); Denver (30.3%); Houston (21.9%); Kansas City (25.4%); and St. Louis (19.0%). Industrial vacancies at 5.8% also remain high—with best bargaining leverage probably centered in these glutted areas: Miami (10.4%); Chicago (7.0%); Dallas (7.0%); Houston (13.7%); North and Central California (8.0%); and, Minneapolis (7.4%).

Paper

Markets continue strong, with 1987 production likely to end up 4% ahead of last year. Prices, meantime, are averaging about 10.5% above those of 12 months ago, with increases recently hitting many coated and uncoated white paper grades, bleached board, linerboard, and corrugated boxes. Blame much of the increase on tightening markets—with industry operating at near 85% of its potential. These rates are likely to stay at this level over the coming year as only about 2.3% is being added to overall industry potential; pretty much in line with anticipated demand gains.

Paper & board capacity
(Percent increase)



Source: American Paper Institute

Copper

Speculative fever is probably behind much of the recent runup which at one point had prices well above $1/lb. It would be unrealistic to expect any decline back to the 70-80¢/lb. range of a few months back for market fundamentals remain quite bullish. Thus while third world production during the first nine months of 1987 was down 1%, consumption was up 7%. One result: Consumer, producer and exchange stocks are at a 13-year low. Best bet: Continuing high prices

Aluminum

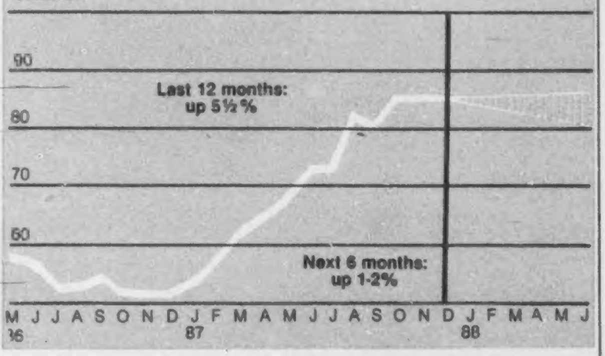
CURRENT SITUATION: Prices remain firm—outpacing earlier projections. Market ingot is now nearly 85¢/lb compared to 53¢/lb one year ago. Fabricated products have also been moving up. Increases have recently been posted on can stock, common alloy sheet, plate, specialty products, building sheet, residential siding, and alloy rod. **Behind the surge: consumer rebuilding of stocks, a producer lag in reactivating closed potlines, and a fall off in global inventories.**

DEMAND: Domestic shipments this year will range between 7.66 and 7.81 million short tons—about 0-2% ahead of last year. Pacing the market are containers and packaging. Some declines are likely in construction and automotive. As for next year, little overall change is seen. **The longer-term outlook, however, is modestly bullish. Average annual gains of 2-3% are seen into the early 1990s.**

SUPPLY: Recent tightness should give way to better balance as new and reactivated capacity, both in North America and overseas, comes on stream. Global output is expected to rise by more than 2.5% next year. Result: producer inventories will begin to increase, with a global gain of over 110,000 metric tons expected for 1988. **The longer-term supply outlook is also beginning to brighten.**

PRICE OUTLOOK: Figure on quotes leveling off or even edging down a bit next year. On the demand side there are increasing indications that customer inventories have been replenished. On the supply front the number of aluminum smelters coming back on line has to have some impact.

Aluminum ingot prices
Cents/lb.



PW PREDICTS

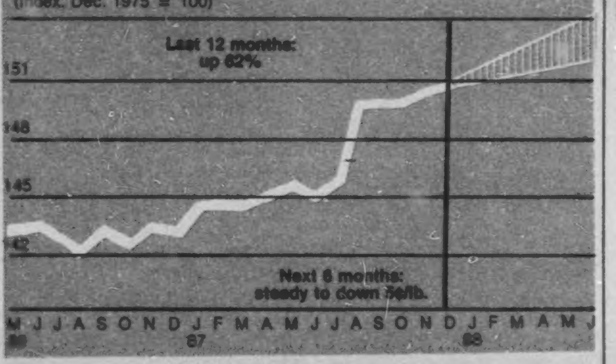
Textile mill products

CURRENT SITUATION: It has been a buoyant year for this depressed industry. Prices have levelled off—but at high levels, with the overall mill product price average running a significant 5.5% above a year ago. One reason for higher tags, aside from brisk demand, has been the softer dollar which has been driving up the price of competing imports. **This year's gain in textile and apparel imports (square yard equivalent basis) is put at only 3.5%.**

DEMAND: Improved activity shows in production figures where this year's mill output is expected to run 8-9% above 1986. And next year shouldn't be all that bad, with producers talking in terms of another 3-5% advance. **And while the weaker dollar is behind much of the optimism, there are other factors at work here, too:** 1) the shaky stock market; 2) stricter enforcement of import quotas and, 3) the success of the "Made in the U.S.A" and "Quick Response" campaigns.

SUPPLY: Gluts are pretty much a thing of the past. This is certainly true where cotton and wool are in snug supply. Fabrics, too, are a bit harder to find because of 1) growing demand; 2) rationalization of capacity; and, 3) the slowing down of imports. The best indicator of a changing market is the rise in the textile mill product operating rate, **currently near 90%, in sharp contrast to the 80% low of early 1985.**

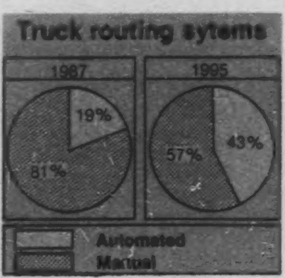
PRICE OUTLOOK: A slow rise is likely. Candidates for near-term advances include polyester staple and a few other manmade fibers, selected gray goods, denims and carpets—with the latter reflecting higher fiber costs. Beyond that, tags should take a breather as demand levels off and new capacity gives buyers more leverage.



Prices are expected to remain high through the first half of 1988, with any relief waiting until later in the year or early 1989 when a significant increase in new production is anticipated.

Distribution costs

Don't forget logistics in setting overall cost-cutting goals. A new study by the National Association of Wholesaler-Distributors, for example, suggests that by 1995 member firms will be funneling only 8.5% of their durable sales dollars into the transportation, storage, and handling functions (down from 9.0% currently). Some of the reasons behind this decline: 1) increasing use of centralized full-stocking locations; 2) gradual replacement of in-house private truck fleets by common and contract carriers; and, 3) much more reliance on automated truck routing systems.



Source: National Association of Wholesaler-Distributors

Methanol

Last year's oversupply has quickly disappeared, with the industry operating rate up near 99% (reflecting a 200 million gallon drop in capacity and a 15% increase in production over the past 12 months). As such, most of an earlier 14¢/gallon price decline has been reversed. The latest ¢/gallon increase, for example, brings the going price up to as high as 38¢/gallon. And further upward movement to above 40¢/gallon is expected by year end.

Steel

Prices are still on the rise, with another 5% or so increase in carbon flat rolled products anticipated for January. Stainless tags, too, are slated for another boost. But that should be it for a while. The 1988 fundamentals are not really all that bullish. Domestic consumption, hurt by sluggish auto and construction chewup, will actually fall about two million tons (into the 87-88 million ton range). Nor will the current year's two million-ton-plus inventory buildup be repeated. Indeed, a fractional dropoff in stocks can't be ruled out. Upshot: Domestic shipments will also decline to near 70 million tons—down about 4% from this year's estimated 73 million ton level.

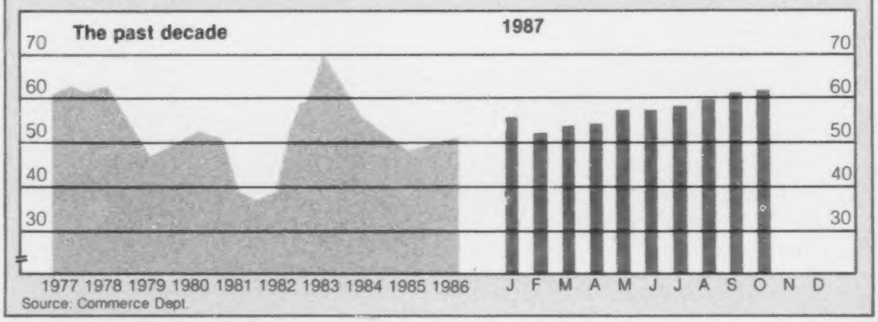
ABS plastic resins

Prices are firming—as lists are boosted and a 2¢/lb temporary voluntary allowance on the key pipe grade is removed. Behind the rise: 1) increasing costs of styrene, acrylonitrile, and butadiene, 2) reduced imports following the imposition of duties on Taiwanese material, and 3) improving demand.

BUSINESS DATATRAK

N.A.P.M. business barometer

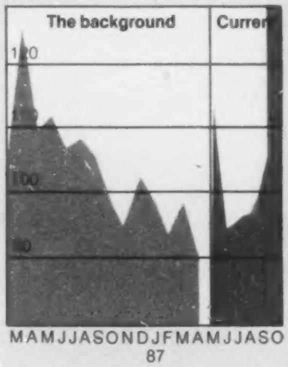
Based on five indicators (employment, inventories, new orders, production, vendor performance)



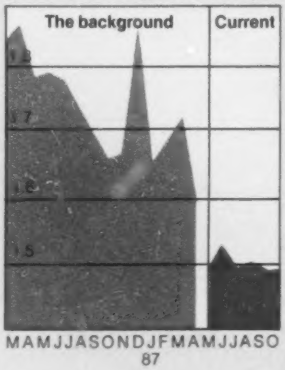
Source: Commerce Dept.

Leading indicators

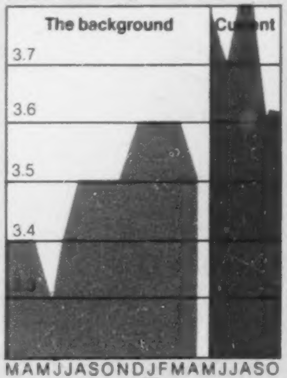
1. Consumer buying intentions
(Index: 1985 = 100)



2. Housing permits
(Millions, seas. adj. annual rates)



3. Factory overtime
(Hours, seas. adj)



KEY ECONOMIC TRENDS

Surveys show momentum is continuing

Sure, the stock market debacle will slow down economic growth.

But there's too much forward momentum to suggest a downturn. One surefire sign of this: the NAPM Business Barometer (chart above) is running an impressive 12 points above the neutral 50 mark—the highest reading in almost four years.

Robert J. Bretz, NAPM Business Survey Committee Chairman, observes, "Notwithstanding what happened with the stock market, the economy entered the fourth quarter with vigorous growth."

Other reassuring news comes from a Conference Board survey which finds consumer confidence dipping modestly—from 116.9 (1986 = 100) just before the mid-October crash to 110.4 two weeks later.

As the board puts it, "While consumers are a bit more cautious, confidence is continuing at high levels."

Buying intentions, too, remain at quite high levels (top chart, right). The post-crash survey finds 73% of queried households saying that the Wall Street slide will have no effect on their plans to buy autos, appliances, furniture and other major goods.

Equally significant is the new National Association of Manufacturers' survey on business optimism. An informal poll of the group's members finds the majority expecting a slower growth pattern but no recession.

Some negative fallout is likely in housing. Weakness here has been apparent for some time—witness the low level of building permits (a forerunner of actual starts; see chart center right).

The decline in other types of construction is not likely to be precipitous. New McGraw-Hill contract award projections (which include everything except 1- and 2-family homes) suggest only a 3% overall decline for 1988.

Nor does the above exhaust the cushioning factors that can still be cited. These include: 1) rising exports engendered by the weaker dollar and, 2) high overtime. The average factory worker is putting in an extra 3-1/2 hours a week (see chart), significantly above 1986 and early 1987 levels. This suggests a pickup in new job opportunities and even another fractional decline in the unemployment rate.

Last but not least, there's the continuing low level of inventories being carried by manufacturers and distributors. If nothing else, this guarantees that as new orders are received, they'll be quickly translated into new production.

All of the above is why near-term industrial production forecasts remain surprisingly high. Consensus projections, for example, now put the advance for the 6-month period ending next March at 3%—only about one percentage point under the pre-crash estimate.

EDI has tremendous cost-cutting potential

Ignore electronic data interchange (EDI) systems—and you do so at your own risk—as the new space-age approach to buying and selling proves to be an increasingly potent cost cutter.

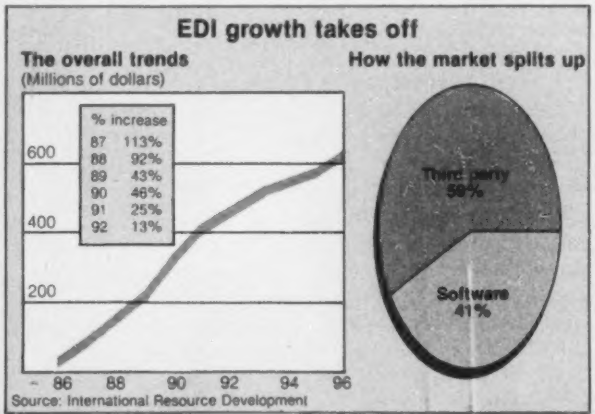
In any event, more and more firms are jumping on the bandwagon. Witness a recent International Resources Development (IRD) study which puts this year's U.S. sales at near $85 million—double the 1986 pace. And that's only the beginning—with the big Norwalk, CT research firm projecting a domestic market of near $500 million by 1992.

Put another way, this implies average gains of near 45% annually over this five-year period. Third party service suppliers who provide "value-added" networking currently account for about 60% of total EDI billings. They should continue to set the pace—with about the same percentage of overall sales expected for this sector through the early 1990s.

The automotive industry provides perhaps the best illustration of EDI's cost-cutting potential. The IRD study, for example, says electronic systems are expected to save anywhere from $200 to $500 per car—as EDI integrates with JIT (just-in-time) and automated manufacturing systems.

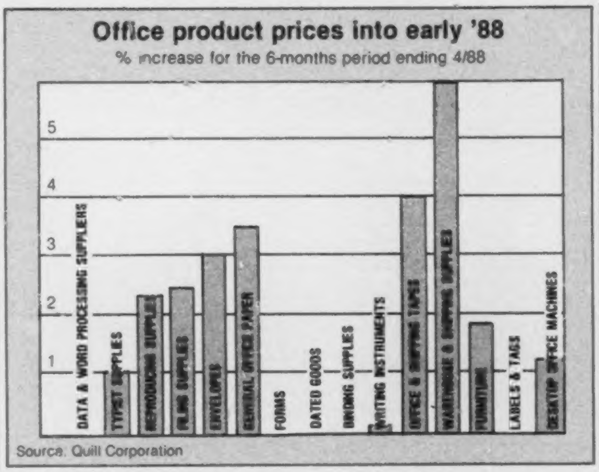
Nor does the above exhaust the potential for savings. New technologies, for example, will eventually include "smart documents"—that is EDI software based on expert systems and artificial intelligence (AI) that will be able to act as automatic document generators, analysts, and evaluators.

But what helps EDI could hurt competing industries. Thus sales of business forms could drop off about 10% over the next few years as some bills of lading, purchase orders, etc. are replaced by EDI.


EDI growth takes off

Source: International Resource Development

Overnight couriers could be even harder hit, with the study suggesting that up to 30% of overnight package service traffic could be vulnerable to replacement by EDI. But any really big impact in this latter area is not expected before 1992.


Office product prices into early '88

% increase for the 6-months period ending 4/88

Source: Quill Corporation

Office products price forecasts

Price pressures should remain quite subdued in the big office product area.

Quill Corporation's latest semi-annual survey, for example, suggests only about a 1.2% increase in overall office product prices for the six-month period ending next April. That's not much more than the 0.9% figure noted six months ago when this leading catalog maker last surveyed its suppliers.

Some of the firm's more specific price projections:

- **Data and wordprocessing supplies:** Figure on a basically flat pattern. Disk prices, which have been declining 10-15%, may be ready to level off. But prices on computer paper and continuous forms will rise about 5%.
- **Typist supplies:** Look for a 1% increase, sparked by increases in correction fluid. But ribbons will hold steady.
- **Reproducing supplies:** Budget for a 2.3% boost—primarily because of continuing hikes in copy paper and toners—with the latter due to a softening of the dollar *vis a vis* the Japanese yen.
- **Filing supplies:** Prices should rise about 2.4%, slightly more than predicted for the last six months. File folder tags could also be up slightly due to higher bristol costs.
- **Envelopes and general office paper:** Prodded by higher paper costs, envelope and stationery prices will be up 3% or more. And papers made from tablet stock (ruled pads, adding machine rolls, etc.) could rise 3-4% by early 1988.
- **Writing instruments:** Only a fractional 0.2% gain is seen as upward pressure from a weak dollar is offset by strong sup-

plier competition.

- **Tapes and other warehouse/shipping supplies:** Higher polypropylene costs could push tapes up 3-5%. And a more broad-gauged cost advance could make for a 6% increase in such items as shipping bags, steel shelving, postal scales, and trash can liners.
- **Furniture:** Expect a 1.8% rise as steel, corrugated and plastic resin costs all rise.
- **Desktop office machines:** Figure on only about a 1.2% advance—down from the 2.5% boost forecast six months earlier. Hikes in Japanese-made products (primarily calculators and dictation equipment) are sparking the gain.

Other areas where little or no price change is expected: Forms, binding supplies, labels, and tags.

This month's breakdown

	Latest level (October)	% change from: Month ago	Year ago
Bearings	358.5	0.1	0.5
Bolts, nuts, etc.	279.2	0.2	0.8
Chemicals, inorganic	295.3	0.9	−0.1
Chemicals, organic	359.3	1.8	10.5
Concrete products	326.1	0.1	0.5
Corrugated cartons	NA	NA	NA
Cutting tools, small	293.2	0.0	0.4
Electric lamps (bulbs)	351.7	−0.3	1.2
Electronic components	202.9	0.4	0.0
Fans and blowers	368.3	−0.8	−0.1
Foundry and forge products	366.8	0.2	1.4
Fuel oil (residual)	612.7	−5.2	35.1
Furniture, commercial	329.3	0.4	2.9
Gasoline	402.3	−1.6	29.4
Glass, flat	241.0	1.1	3.7
Glass containers	401.3	0.0	0.2
Gypsum products	306.0	0.8	−10.8
Hand tools	398.2	0.3	3.3
Hand tools, power driven	242.1	0.0	0.8
Industrial furnaces	403.9	0.4	2.0
Integrating and measuring instruments	241.0	0.2	1.6
Internal combustion engines	359.4	0.3	1.6
Lubricating oil	349.2	1.6	−2.0
Lumber millwork	334.2	0.4	4.4
Material handling equipment	300.3	0.1	1.1
Metal containers	359.9	−0.2	−0.7
Metal mill shapes (nonferrous)	335.1	1.8	12.0
Metal tanks	306.7	0.6	2.9
Motors and generators	361.8	0.6	2.6
Motor trucks	332.6	8.0	0.8
Office and store equipment	159.9	0.1	3.2
Paperboard	310.8	0.7	12.5
Paper boxes and shipping containers	294.4	0.9	7.8
Paper office supplies	244.8	0.9	2.1
Paint	285.1	0.1	0.9
Plastic resins	338.0	4.2	15.4
Precision measuring tools	277.7	−0.3	3.2
Pumps and compressors	365.9	0.2	0.7
Refractories	374.0	−0.3	0.9
Rubber belts and belting	328.9	0.2	−2.4
Scales and balances	235.1	−0.1	1.0
Steel products	365.3	2.7	4.5
Switchgear	291.3	−0.3	1.8
Textiles, synthetic fibers	150.4	0.8	1.1
Textiles, gray fabrics	160.1	0.3	6.7
Tires and tubes	232.8	0.3	−0.3
Transformers and power regulators	240.3	−0.1	2.8
Welding equipment	306.4	0.4	1.5
Wire and cable	223.0	0.7	8.4

CURRENT PRICES

Chemicals, plastics, metals lead increases

Industrial producer prices continue to show a slight tendency to advance. All in all, about 0.5% was added to overall averages over the latest reported month—as increases in such areas as chemicals, plastics, and metals more than offset new weakness in the energy sector.

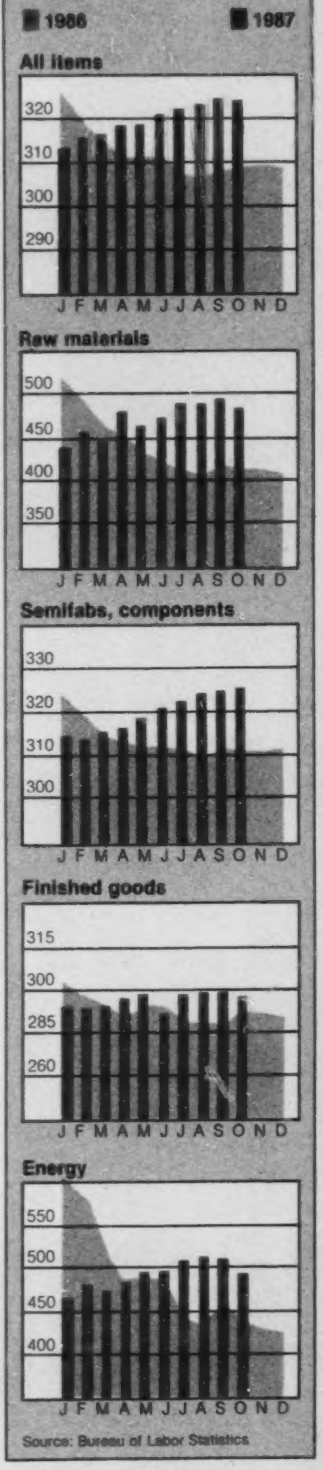
Some of the biggest boosts were in the chemicals and plastics areas—as inorganics, organics, and plastic resins advanced 0.9%, 1.8%, and 4.2% respectively (see table). The increase in plastics was the largest one-month advance in more than eight years as virtually every commodity resin moved up the price ladder.

Metals also posted some fairly big increases—with steel mill product price averages jumping 2.7% over the month, leading the way. Other metals contributing to the latest overall rise were aluminum, copper, cadmium, and most metal scrap.

Other sectors reporting modest price increases were paper (containers, paperboard, and office supplies) and construction materials (flat glass, wire products, wiring devices, fabricated metal products, plastic construction products, and asphalt roofing). But bucking the trends were softwood lumber and plywood, both of which turned a bit easier.

Industrial prices

(Index: 1967 = 100)

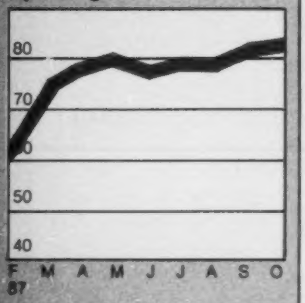


Source: Bureau of Labor Statistics

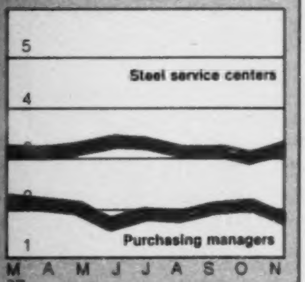
BUSINESS DATATRAK

Steel

Operating rates

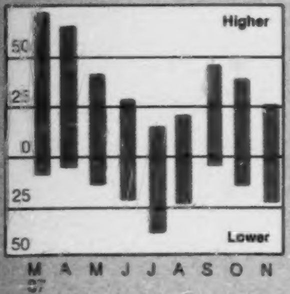


Inventories
(Months supply on hand)

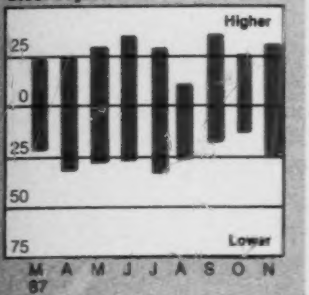


Demand
(Percent of respondents)

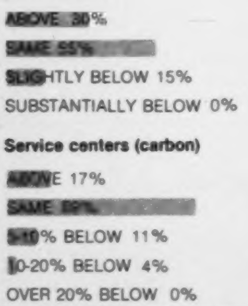
Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)



Steel buyers

ABOVE 30%
SAME 55%
SLIGHTLY BELOW 15%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 17%
SAME 68%
5-10% BELOW 11%
10-20% BELOW 4%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

Much more precipitous on the downside was the dropoff in energy. Heading lower during the month were gasoline, natural gas, residual fuel, liquid petroleum gas, and crude oil. These were more than enough to offset increases in home heating oil, diesel fuel, and jet fuel.

Another encouraging sign: a fractional decline in capital goods, despite relatively firm demand. Machine tools, mining machinery, fans and blowers, and switch gear were all down during the month.

One government spokesman, in commenting on the overall trend, said he expected an even better overall showing this month. Reason: some of the declines sparked by the recent stock market crash will only now begin to show up in official figures.

This same official is also optimistic about early 1988. He sees the industrial price average rising only about 1% over the first quarter—or just about 4% at annual rate.

STEEL SCENE

Sellers' market continues

The sellers' market in steel mill products still has a ways to go. Some impressive evidence on this score:

- Rising prices, with another broad-gauged boost scheduled for the beginning of the year.
- Longer lead times and expectations of continued supply snugness through winter and into early spring.
- Anticipated demand increases, both by buyers and steel service centers.

On the tightness score, the latest NAPM steel buyer survey finds availability now a concern in nine of the 10 steel categories monitored each month. Biggest worries over the next six months are centered in plate, hot-rolled sheet, cold-rolled sheet, and coated sheet.

Meantime, on the demand front some 32% of queried PMs expect to increase their receipts of the metal over the next three months—considerably over the 24% who see some decline. More important, this marks the third straight month that those indicating increases have been outnumbering their more cautious brethren.

Zero in on service centers and the picture is pretty much the same, with 27% of those responding to the latest Steel Center Institute (SSCI) survey seeing increases—significantly above the 21% who feel some declines may be in order.

Viewed from a slightly different perspective, Andrew Sharkey, SSCI president, now expects his members to ship 23 million tons this year; a 6% gain over 1986.

Commenting on this larger-than-overall-steel-consumption gain, Sharkey cites two basic factors: 1) Buyer responsiveness to the long leads and delivery problems of recent quarters; and, 2) service center marketing of total cost reduction programs.

On a more sobering note, this service center spokesman doesn't think that 1988 will be quite as robust—both for the steel industry and his own group. He predicts a relatively flat 86-90 million-ton steel consumption year, with only a few sectors (electric machinery, non-electric machinery, aerospace, and energy) likely to see improvement. The big auto market, on the other hand, should be down.

Sharkey feels that the current supply tightness could begin to ease, perhaps as early as the second quarter of 1988. Factors behind his optimism on this score: 1) elimination of mill production bottlenecks; 2) the addition of some new mill capacity and, 3) rather steady inventories after the buildup of the past year.

But, the levelling off in demand won't come fast enough to prevent new price boosts. Thus nearly one out of every three service centers expects bigger than 5% price hikes over the next six months.

Import price bargains continue to dry up. Only

15% of queried steel buyers, for example, now say foreign mills are offering price breaks—and even then the advantages are defined as being only "slight".

This is verified by service centers. Again, only 15% note lower prices in the carbon steel area—a figure offset by 17% reporting higher overseas asking prices. Bargains are also hard to find in stainless with only 28% reporting cheaper foreign tags—a far cry from the 100% figure recorded just one year earlier.

But not everyone is pessimistic on prices. Another service center spokesman, John H. Sennett, SSCI chairman, feels that the worst of the runup may be over. He adds that January hikes may well be the last for some time. In fact, he's not all that sure that each and every one of the anticipated increases at that time will hold up.

PROCUREMENT STATUS

Buyers' market fading a bit

A combination of seasonal demand pickup, temporary supply dislocations, and somewhat more robust export sales in some sectors is making for slightly snugger markets.

That's not to say things are really tight—for in most cases there's still ample capacity around. And there's more production potential coming on stream in 1988.

What the new trend does mean, however, is that the long '82-early '87 buyers' market has all but disappeared—and that lead times are out a bit *vis a vis* six and twelve months ago.

The latter is confirmed by another month of above neutral (above 50) readings for PW's exclusive lead time index (see chart). Also pointing toward some tightening is the fact NAPM surveys continue to show a growing number of respondents experiencing slower deliveries.

Finally, there has also been some stretchout in forward commitments for purchased materials. At latest report, for example, some 48% of NAPM survey respondents were contracting 60 days or more in advance—up from 42% just one month earlier.

On the other hand, the number of so-called problem areas remains limited. Most are basic raw materials such as steel, copper, paper, and a few of the more popular volume plastics and chemicals. Also worth noting in this respect:

More important, corrective actions are underway. Thus more paper, copper, and plastic resin capacity additions have been announced. And existing potential in steel is being more fully utilized.

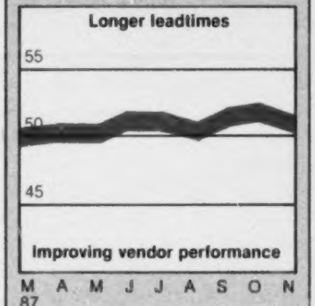
Another reassuring note for worried buyers: The recent stock market slide means that factory output in 1988 won't be quite as robust as originally envisioned—something which suggests relatively modest consumption gains for most raw materials.

A slowdown in inventory accumulation should also contribute to overall availability. As noted elsewhere in this issue, steel inventories will be steady or even down a bit. And there's some indication the previously razor-thin stocks in nonferrous metals and paper have been beefed up to more normal levels. Indeed, there are already signs of a general flattening out—with more buyers now adding to than paring inventories.

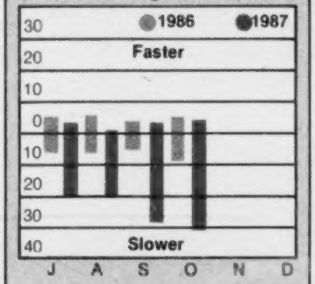
Monthly procurement status report

Leadtime index

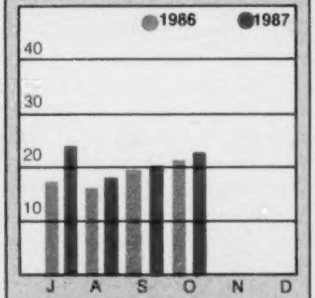
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



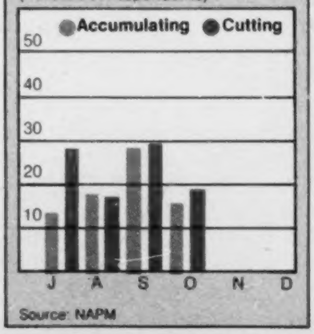
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Corrugated has tightened a bit (to 3 weeks). Also in the packaging area, shrink film bags are out (to 6-8), but Mylar has come in (to 6-8). It also takes longer to get electrical items like wire, conduit, connectors, and switches (2-4) and bichromate chemicals (½-1). But surfactants are in (to ½).

Cleveland: Steel canisters have come in a week (to 1). Ditto, some plastic compounds (to 1-3). Remaining basically unchanged are cold-finish aluminum (8), paints (2-3), skids (1-3), corrugated containers (2-3), alloying materials (on demand), hard and softwood lumber (1-3), and steel drums (on demand).

Houston: There's concern in the copper area—about availability as well as price. Also some modest stretchout in cast steel valves (150-600 psi)—from 0-3 months to 0-4 months. Structurals have also moved out—from 2-3 months to 2-4 months. And galvanized, while steady now, takes 5 weeks longer than it did this past summer.

Los Angeles: Good news here, with modest lead time shrinkages in 3 areas (to these lower weekly leads): Grey iron castings (5-7), brass castings (8-10), and custom storage tanks (8-10). Fasteners hold unchanged (7-9 domestic and 18-20 foreign). Ditto, electromechanical devices (6-8) and custom seals and gaskets (5-6).

Philadelphia: A few stretchouts to these new weekly waits: Glass containers (8-10), metal closures (4-6), polyethylene and polypropylene films (6), and chemicals for foam in place packaging (2). A more mixed picture for aluminum foil as imports rise to 12-14 weeks but domestic comes in to 6-8.

Pittsburgh: Zinc has come in a week (to 4)—reflecting an improving supply situation. Other typical weekly leads: Plastic bags (3-4), corrugated and folding boxes (3-4), waterproof papers (8), steel strapping (2-3), seals (1-3), plastic resins (5-6), and most alloying metals except copper and zinc (2-3).

Leadtimes (in weeks)

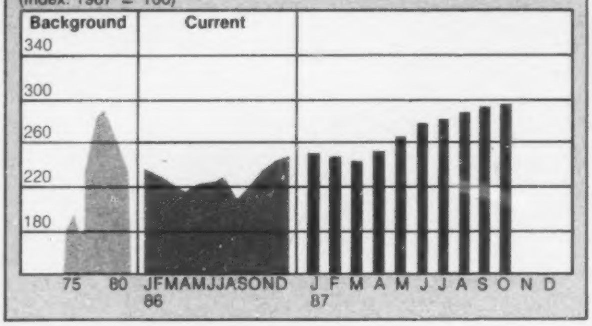
	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	11	11	8
Plate (Phil)	10	10	3½
Plate (Chgo)	13½	13½	9
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	11	11	11
Cold-Drawn Bars (Phil)	5½	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	12	12
Structurals (Chgo)	5	5	4½
Structurals (Hous)	13	11	11
Tubing (Phil)	8½	8½	5½
Grey Iron Castings (LA)	6	7	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	14	14	16
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	4½	4½	4½
Motors (Phil)	12	12	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	2½
Plywood (Chgo)	5	5	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅛	⅛	⅛
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	4	2	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	2	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	7	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	½
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	22	22	13
Aluminum Plate (Chgo)	14	14	12
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	22	22	13
Brass Castings (LA)	9	11	9
Brass Rods (Chgo)	7½	7½	7½
Brass Sheet (Chgo)	11	11	11
Brass Tube (Chgo)	8½	8½	13
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	6
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	3	3	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	4	5	3
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	50	50	50
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	8	8	8
Fasteners, Std. (Phil)	3	3	3
Heat Exchangers, Carbon-alloy Steel (Hous)	22	22	21
Heat Exchangers, Hi-pressure (Hous)	25	25	24
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	21	21	21
Pumps (LA)	11½	11½	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	9	4	4
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK

Raw material price barometer

Latest month 295.2
Month before 292.4
Year ago 235.5

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	23.95
Steel, bars, Pitts., cwt.	16.50	16.50	23.95
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	31.00
Steel, plates, Pitts., cwt.	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	28.15	26.90	25.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.810	.835	.525
Antimony, N.Y., dealer, lb.	1.09	1.12	1.18
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	1.64	1.50	1.27
Brass, yellow, [sheet], lb.	1.59	1.45	1.22
Cadmium, N.Y., dealer, lb.	3.05	2.25	0.98
Copper, electrolytic, wire bars, refd., lb.	1.00	.86	.63
Copper sheet, over 24 in., lb.	1.73	1.59	1.36
Lead, common, N.Y., lb.	.420	.420	.268
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	355.00	355.00	192.00
Molybdenum, oxide, dealer, lb.	2.79	2.92	3.03
Nickel, cathode, dealer, lb.	2.71	2.48	1.78
Platinum, dealer, oz.	495.00	567.00	537.00
Silver, N.Y., oz.	6.63	7.56	5.73
Tin, N.Y., dealer, lb.	3.23	3.15	2.86
Zinc, Prime West, East St. Louis, lb.	.42	.42	.465
Zinc, die casting alloy, No. 3, lb.	.475	.475	.525
PAPER			
Uncoated book #3 offset, ton	890.00	860.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	17.17	17.34	16.24
Grocery sacks, ton	410.00	410.00	390.00
Solid bleached paperboard, ton	650.00	620.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	380.00	380.00	320.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.271	.246	.214
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.24	1.24	1.05
Cotton middling, 1", N.Y., lb.	.609	.654	.433
Printcloth, 48", 80x80, N.Y., spot. yd.	0.95	0.95	1.05
Army duck, 37", 13 oz., yd.	1.51	1.51	1.40
Blended printcloth, 64", 78x54, yd.	.93	.95	.80
20s combed yarns	1.98	2.03	1.74
Wool 64s, Staple, lb.	3.00	2.90	1.90

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	75.00	105.00	80.00
Benzene, petroleum, tanks, Houston, gal.	0.90	0.92	0.85
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.78	.81	.91
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.36	.32	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.32	.32	.27
Polyethylene resin, low density liner film grade (market place), lb.	.385	.345	.280
Polypropylene, homopolymer grade (market price), lb.	.470	.440	.325
Polystyrene, general purpose grade (market price), lb.	.520	.520	.350
Polyvinyl chloride, pipe grade (market price), lb.	.375	.365	.275
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.40	.40	.22
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	157.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.80	.80	.77
Xylene tanks, gal.	.78	.75	.80
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	332.60	338.90	328.35
Lumber 2x2 pine, mbf, cl	330.65	334.45	316.60
Plywood, plyform, ¾", msf, cl	575.50	584.60	592.35
Plywood, ⅝", msf, cl	391.45	391.00	392.45
Cement, bulk, ton, tl	63.73	63.73	63.28
Sand, ton, cl	7.12	7.14	6.62
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.88	49.13	48.15
Crushed stone, 1½", ton, cl	8.31	8.32	7.83
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.90	0.90	0.82
Gypsum sheathing, ½"x1"x8", msf, tl	226.69	228.46	215.07
Brick, common, per thousand, tl	198.26	198.26	186.51
Asphalt paving, AC-20	140.30	139.34	127.36
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.52	7.50	7.36
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	14.75	15.25	10.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	19.75	19.00	14.75
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.560	.588	.415
Gasoline, 94 oct., reg., Chi., tank car, gal.	.540	.538	.436
Heating oil, No. 2, Chi., bulk, gal.	.585	.555	.428
Heating oil, No. 2, N.Y., bulk, gal.	.568	.603	.420
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.553	.555	.433
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.260	.260	.240
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	114.00	114.00	79.00
Steel, No. 1 hvy., dlvd., Chi., ton	115.00	115.00	72.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.890	.785	.625
Copper, No. 2, East, wholesale buy, dlvd., lb.	.800	.700	.545
Brass, red, East, wholesale buy, dlvd., lb.	.850	.745	.510
Brass, yellow, East, wholesale buy, dlvd., lb.	.365	.365	.330
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.500	.510	.315
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.565	.575	.330
Zinc, old, East, wholesale buy, dlvd., lb.	.200	.200	.200
Lead, clean solids, East, wholesale buy, dlvd., lb.	.275	.275	.168
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	35.00	35.00	28.00
Paper, old corrug. box, dlr., N.Y., ton	20.00	20.00	24.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.230	.230	.105

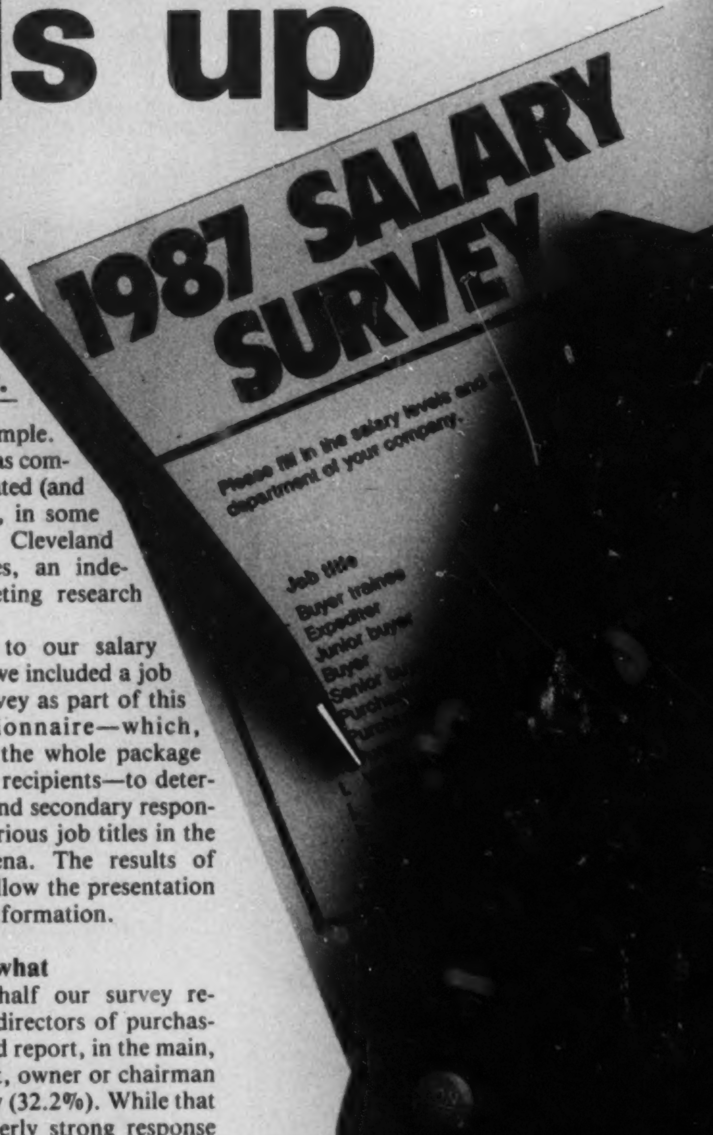
[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

The salary scene:

It all adds up

Ron Stevens, senior editor

Some surprises emerge from the data in this year's survey, but salaries remain on the upswing, turnover remains low.



Figgers don't lie, according to the crackerbarrel philosopher, but liars do figger—which goes to the heart of all surveys and makes them interesting, revealing, and slippery.

So it is with our 1987 salary survey, which the professional market research firm doing our tabulations told us reassuringly was a "valid sample." Nevertheless, it doesn't tell us what we expected to hear. What do you do when that happens? We elected to tell you what we learned and let expectations—ours, and maybe yours—go hang.

Briefly, our methodology was to mail to our list of top managers on an *nth*-name basis, reaching approximately 3,000 high-level purchasing executives. The logic behind this approach is simply to get an upper management view of salaries—who better to tell us what various department members are making?—while letting us know about the concomitant perks, plans for future raises, etc.

The returns were more than adequate to give what we referred to earlier—a valid sample. The raw data was compiled and tabulated (and cross-tabulated, in some instances) by Cleveland Field Resources, an independent marketing research firm.

In addition to our salary questionnaire, we included a job description survey as part of this year's questionnaire—which, frankly, made the whole package daunting to its recipients—to determine primary and secondary responsibilities for various job titles in the purchasing arena. The results of that inquiry follow the presentation of the salary information.

Who told us what

More than half our survey respondents are directors of purchasing (56.8%) and report, in the main, to the president, owner or chairman of the company (32.2%). While that suggests an overly strong response from smaller businesses, such was not the case. When we asked the total number of employees at the re-

Average age by job title

Job title	Education level required
BUYER TRAINEE	12-59.5%
EXPEDITER	12-75%
JUNIOR BUYER	12-60.3%
BUYER	18-43.4%
SENIOR BUYER	16-57.3%
PURCHASING AGENT	16-50.5%
PURCHASING MANAGER	16-79.1%
PURCHASING DIRECTOR	16-75.0%
VP PURCHASING	16-80%
MATERIALS MANAGER	16-87.1%
MATERIALS DIRECTOR	16-88.9%
VP MATERIALS	16-100%

Raises—1987 vs. 1986

Job title	% average salary change (1987 vx. 1986)
BUYER TRAINEE	4.75
EXPEDITER	4.462
JUNIOR BUYER	5.326
BUYER	5.084
SENIOR BUYER	5.124
PURCHASING AGENT	5.163
PURCHASING MANAGER	5.290
PURCHASING DIRECTOR	5.414
VP PURCHASING	6.043
MATERIALS MANAGER	5.623
MATERIALS DIRECTOR	5.750
VP MATERIALS	7.467

spondent's *plant or location*, we got these results: 1-99 employees, 27.6%; 100-249 employees, 19.2%; 250-499, 16.6%; 500-999, 18%, and 1,000-plus employees, 17.7%.

The number of *purchasing* employees at the plant or location surveyed averaged 9.53.

Average (approximate) gross sales of the companies represented was $19,781,000, with annual purchase dollar volume listed as: under $10 million (40.9%); $10-50 million, 29.7%; $50-150 million, 17.6%; $150-500 million, 6.9%, and more than $500 million, 4.9%.

What about the money?

Just exactly who earns what; who gets bonuses—and how big are they; how many years' experience do you need, how big will raises be next year, etc.? We hoped you'd ask.

Our data show low and high averages, not low and high extremes. Thus, for each category there will be people earning more, or less, than the average low and high shown in our survey.

Keeping in mind that we gleaned the lion's share of our information

How much schooling?

Job title	Average age of employees in this position
BUYER TRAINEE	27
EXPEDITER	29
JUNIOR BUYER	30
BUYER	34
SENIOR BUYER	35
PURCHASING AGENT	35
PURCHASING MANAGER	39
PURCHASING DIRECTOR	42
VP PURCHASING	46
MATERIAL MANAGER	44
MATERIALS DIRECTOR	46
VP MATERIALS	44

Big companies pay more—Salaries by gross sales

	LESS THAN 150 MILLION		MORE THAN 650 MILLION	
	$LOW	$HIGH	$LOW	$HIGH
BUYER TRAINEES	14,666	19,000	19,500	27,333
EXPEDITERS	16,143	19,833	18,500	33,500
JR. BUYERS	14,200	18,069	19,000	25,800
BUYERS	16,912	21,453	20,555	33,444
SR. BUYERS	18,175	24,360	22,941	34,500
PURCHASING AGENTS	21,460	27,088	28,353	43,529
PURCHASING MGRS	25,089	31,506	33,895	51,666
PURCHASING DIRECTORS	33,652	39,866	43,150	66,714
VP PURCHASING	41,421	49,039	56,762	76,952
MATERIALS MGRS.	40,866	48,184	66,333	74,500
MATERIALS DIRECTORS	44,363	61,052	70,250	89,500
VP MATERIALS	55,857	50,833	88,000	96,000

from directors of purchasing departments, this is what we found:

- **Buyer trainees** averaged a low of $15,692 and a high of $21,909; with an average of 1.7 years' experience.
- **Expediters** earned from a low average of $16,231 to a high of $21,250; they averaged 4.1 years' experience.
- **Junior buyers** made from $14,957 to a high average of $19,609, based on 4.01 years of experience.
- **Buyers** were paid between $17,549 at the low end and $23,264 as a high average. They had, on average, 6.3 years' experience.
- **Senior buyers** earned a low average of $20,685 and a high average of $27,616, with an average experience of 10.8 years.
- **Purchasing agents'** salaries ranged from a low of $23,173 to a high average of $31,297. They averaged 9.7 years' experience.
- **Purchasing managers**, with an average of 13 years' experience, earn from a low average of $28,143 to a high average of $37,074.
- **Purchasing directors**, who provided most of our responses, are earning from a low average of $35,676 to a high average of $47,971. They also average 16.8 years in purchasing.
- **Vice presidents of purchasing** average 19.7 years' experience and make from $45,070 to $56,348.
- **Materials managers** are paid at the low average end of the scale $44,755, and at the high end, $52,222, with an average of 13.8 years of experience.

Job description survey

P = Primary responsibility
S = Secondary responsibility
N = No involvement

	VP-Procurement	VP-Materials	Director-Procurement	Director-Materials
OVERSEE TOTAL PROCUREMENT PROGRAM	P 88.6 S 7.1 N 4.3	P 81.8 S 9.1 N 9.1	P 88.6 S 7.6 N 3.8	P 78.8 S 12.1 N 9.1
PREPARE DEPARTMENT BUDGET	P 63.3 S 18.3 N 18.3	P 75.0 S 10.0 N 15.0	P 78.7 S 11.0 N 10.2	P 73.5 S 12.1 N 8.8
OVERSEE MATERIALS MANAGEMENT	P 62.5 S 23.2 N 14.3	P 84.6 S 3.8 N 11.5	P 47.7 S 31.5 N 20.7	P 78.9 S 13.2 N 7.9
REVIEW POS FOR CONTRACT CONFORMANCE	P 48.3 S 31.0 N 20.7	P 52.9 S 23.5 N 23.5	P 51.8 S 36.6 N 11.6	P 36.4 S 51.5 N 12.1
ANALYZE MAKE/BUY DECISIONS	P 54.4 S 31.6 N 14.0	P 55.6 S 27.8 N 16.7	P 59.7 S 32.8 N 7.6	P 39.4 S 48.5 N 12.1
SELECT/IMPLEMENT AUTOMATED PURCHASING SYSTEMS	P 54.4 S 33.3 N 12.3	P 66.7 S 23.8 N 9.5	P 63.7 S 27.4 N 8.9	P 61.8 S 35.3 N 2.9
VISIT VENDORS	P 38.3 S 46.7 N 15.0	P 39.1 S 43.5 N 17.4	P 56.0 S 40.3 N 3.7	P 35.3 S 55.9 N 8.8
CONTRACT FOR COMMODITIES	P 50.9 S 25.5 N 23.6	P 55.6 S 11.1 N 33.3	P 57.8 S 35.3 N 6.9	P 31.3 S 50.0 N 18.8
OBTAIN BEST BUY, ON-TIME	P 48.0 S 30.0 N 22.0	P 41.2 S 35.3 N 23.5	P 48.6 S 40.2 N 11.2	P 25.0 S 46.9 N 28.1
DEVELOP SOURCES FOR HIGH-DOLLAR, COMPLEX BUYING	P 58.6 S 19.0 N 22.4	P 52.9 S 23.5 N 23.5	P 69.0 S 23.8 N 7.1	P 45.5 S 39.4 N 15.2
COORDINATE VENDOR NEGOTIATIONS	P 54.5 S 29.1 N 16.4	P 44.4 S 33.3 N 22.2	P 65.9 S 28.5 N 5.7	P 52.9 S 38.2 N 8.8
SUPERVISE COST REDUCTION PROGRAM	P 60.3 S 22.4 N 17.2	P 73.7 S 15.8 N 10.5	P 68.8 S 28.9 N 2.3	P 63.9 S 33.3 N 2.8
REVIEW BIDS AND QUOTES	P 50.0 S 31.5 N 18.5	P 60.0 S 20.0 N 20.0	P 48.8 S 42.1 N 9.1	P 45.2 S 38.7 N 16.1
DIRECT BUYER ACTIVITIES	P 50.9 S 28.3 N 20.8	P 42.9 S 7.1 N 50.0	P 68.0 S 27.0 N 4.9	P 51.6 S 38.7 N 9.7

- **Materials directors** earn, at the low average, $47,719, and at the high, $64,200. They average, according to our survey, 17.8 years in purchasing.
- **Vice presidents of materials** average 19.1 years' experience and earn from a $59,375 low average to a high average of $63,125.

Dialing the statistical microscope down a little finer, we looked at salaries in the largest and smallest companies reporting and found, as you might expect, that it pays more to work for a larger company than a smaller one—what we were surprised by was how great the disparities were. Looking at companies of less than $150 million in gross sales, and comparing them to companies with more than $650 million in gross sales, we found that buyer trainees made a low average of $14,666 with the smaller companies, and $19,500 with larger companies. With smaller companies, the high average for this same category was $19,000, and with large companies it was $27,333.

All of this information appears in a chart with this story, but let us cite one more example for the career-minded: vice presidents of materials in small firms had a low average salary of $35,857 and a high average of $50,833; the same job title with a large company had a low average of $88,000 and a high of $96,000.

How much did salaries increase from 1986? Our respondents said they went up in all categories, anywhere from 4.75% for buyer trainees, to 7.46% for a vice president of

Purchasing Manager	Materials Manager	Purchasing Agent	Senior Buyer	Buyer	Jr. Buyer	Expeditor	Buyer Trainee
P 56.5 S 33.0 N 10.4	P 80.8 S 11.5 N 7.7	P 20.0 S 25.3 N 54.7	P 2.7 S 29.7 N 67.6	P 4.4 S 16.8 N 78.8	P 0.0 S 0.0 N100.0	P 2.2 S 2.2 N 95.5	P 0.0 S 11.8 N 88.2
P 47.5 S 33.0 N 20.3	P 61.5 S 11.5 N 15.4	P 13.0 S 24.7 N 62.3	P 2.7 S 22.7 N 74.7	P 1.8 S 14.2 N 84.1	P 0.0 S 5.1 N 92.3	P 0.0 S 4.8 N 95.2	P 0.0 S 5.9 N 94.1
P 34.0 S 39.8 N 26.2	P 88.9 S 5.6 N 5.6	P 18.9 S 31.1 N 50.0	P 5.6 S 21.1 N 73.2	P 10.4 S 19.1 N 70.4	P 0.0 S 11.1 N 88.9	P 4.7 S 7.0 N 88.4	P 0.0 S 11.8 N 88.2
P 70.4 S 25.2 N 4.3	P 42.9 S 38.1 N 19.0	P 73.3 S 21.1 N 5.6	P 57.5 S 32.2 N 10.3	P 42.3 S 45.3 N 12.4	P 22.7 S 36.4 N 40.9	P 4.7 S 9.3 N 86.0	P 0.0 S 23.5 N 76.5
P 69.5 S 22.9 N 7.6	P 51.9 S 26.1 N 14.8	P 65.9 S 26.1 N 8.0	P 58.8 S 29.4 N 11.8	P 50.0 S 31.9 N 18.1	P 16.3 S 32.6 N 51.2	P 6.8 S 9.1 N 84.1	P 16.7 S 11.1 N 72.2
P 48.7 S 39.5 N 11.8	P 46.2 S 15.4 N 38.5	P 14.5 S 51.8 N 33.7	P 13.4 S 39.0 N 47.6	P 6.7 S 36.1 N 57.1	P 0.0 S 20.5 N 79.5	P 0.0 S 16.3 N 83.7	P 0.0 S 5.9 N 94.1
P 60.5 S 36.3 N 3.2	P 20.8 S 54.2 N 25.0	P 62.9 S 30.9 N 6.2	P 68.3 S 26.0 N 5.8	P 55.0 S 32.9 N 12.1	P 35.4 S 20.8 N 43.8	P 6.7 S 37.8 N 55.6	P 5.6 S 44.4 N 50.0
P 65.1 S 25.7 N 9.2	P 30.4 S 43.5 N 26.1	P 68.6 S 19.8 N 11.6	P 67.8 S 22.2 N 10.0	P 51.8 S 24.1 N 24.1	P 29.8 S 27.7 N 42.6	P 2.4 S 12.2 N 85.4	P 6.3 S 50.0 N 43.8
P 68.5 S 26.9 N 4.6	P 20.8 S 41.7 N 37.5	P 87.6 S 9.5 N 2.9	P 86.0 S 10.0 N 4.0	P 84.1 S 14.0 N 1.8	P 69.2 S 15.4 N 15.4	P 14.3 S 21.4 N 64.3	P 44.4 S 16.7 N 38.9
P 71.7 S 22.5 N 5.8	P 43.5 S 30.4 N 26.1	P 54.0 S 29.9 N 16.1	P 52.7 S 37.6 N 9.7	P 26.9 S 43.3 N 29.9	P 17.4 S 32.6 N 50.0	P 2.3 S 16.3 N 81.4	P 0.0 S 33.3 N 66.7
P 77.2 S 19.5 N 3.3	P 36.0 S 36.0 N 28.0	P 62.9 S 30.9 N 6.2	P 62.6 S 29.3 N 8.1	P 42.4 S 42.4 N 15.1	P 25.0 S 34.1 N 40.9	P 2.3 S 14.0 N 83.7	P 11.1 S 27.8 N 61.1
P 73.4 S 23.4 N 3.2	P 60.0 S 24.0 N 16.0	P 30.3 S 58.4 N 11.2	P 22.7 S 54.5 N 22.7	P 10.9 S 57.0 N 32.0	P 7.0 S 30.2 N 62.8	P 2.3 S 27.9 N 69.8	P 0.0 S 29.4 N 70.6
P 77.0 S 21.3 N 1.6	P 41.7 S 41.7 N 16.7	P 77.7 S 19.4 N 2.9	P 82.7 S 13.3 N 4.1	P 69.7 S 24.5 N 5.8	P 58.0 S 24.0 N 18.0	P 9.5 S 23.8 N 66.7	P 36.8 S 31.6 N 31.6
P 84.3 S 14.2 N 1.6	P 33.3 S 37.5 N 29.2	P 51.8 S 20.0 N 28.2	P 25.6 S 30.2 N 44.2	P 14.5 S 16.1 N 69.4	P 5.0 S 12.5 N 82.5	P 4.7 S 4.7 N 90.7	P 0.0 S 5.9 N 94.1

materials. In between, results were as follows: expediters, 4.46%; junior buyers, 5.32%; buyers, 5.08%; senior buyers, 5.12%; purchasing agents, 5.16%; purchasing managers, 5.29%; purchasing directors, 5.41%; vice presidents of purchasing, 6.04%; materials managers, 5.62%, and materials directors, 5.75%.

Looking ahead to 1988, and admittedly before the stock market went wonky, our respondents predicted that salaries would increase again. Predicting up to a 3% increase are 20.9% of the respondents; 63.1% are looking for 3.1-6% increases; 14.2% expect to see 6.1-9% improvements, and only a minuscule 1.8% think salaries would increase by more than 9%.

All that's compensation isn't in the paycheck, of course. We asked our respondents about incentives and perks their employers might give. A total of 38.6% said simply, "none." Of those who didn't get "none," however, 48.2% said bonuses were available; 13.5% listed stock options as an incentive, 8.7% said they got company cars, and 8.2% cited various incentive awards. As a subset, 18.6% of those with incentives said they would increase, 65.9% said they would remain the same, and 6.1% felt they would decrease.

How often are raises given? Annually seemed to be most companies' choice, at 87.5%; 28.1% said raises would be given as merited.

As far as education is concerned,

Job description survey

P = Primary responsibility
S = Secondary responsibility
N = No involvement

	VP-Procurement	VP-Materials	Director-Procurement	Director-Materials
TRAIN NEW BUYERS	P 32.0 S 32.0 N 36.0	P 50.0 S 14.3 N 35.7	P 53.9 S 33.9 N 12.2	P 40.0 S 43.3 N 16.7
DEVELOP/ANALYZE PRICE AND SUPPLY DATA	P 44.2 S 32.7 N 23.1	P 33.3 S 20.0 N 46.7	P 54.3 S 37.1 N 8.6	P 37.5 S 37.5 N 25.0
ANALYZE TRENDS (FORECASTS)	P 58.9 S 21.4 N 19.6	P 44.4 S 27.8 N 27.8	P 69.5 S 24.2 N 6.3	P 69.7 S 24.2 N 6.1
MANAGE BUYING FOR OTHER LOCATIONS	P 38.8 S 24.5 N 36.7	P 21.4 S 35.7 N 42.9	P 51.3 S 21.7 N 27.0	P 43.3 S 30.0 N 26.7
ASSIGN BUYING RESPONSIBILITY TO OTHERS	P 55.4 S 21.4 N 23.2	P 52.9 S 17.6 N 29.4	P 74.8 S 21.1 N 4.1	P 67.7 S 25.3 N 6.5
PARTICIPATE IN VALUE ANALYSIS PROJECTS	P 35.7 S 46.4 N 17.9	P 52.9 S 35.3 N 11.8	P 51.6 S 36.9 N 11.5	P 41.9 S 51.6 N 6.5
OPTIMIZE INVENTORY/INVESTMENT	P 53.7 S 37.0 N 9.3	P 70.0 S 15.0 N 15.0	P 59.2 S 28.3 N 12.5	P 68.6 S 28.6 N 2.9
MEASURE INVENTORY FOR MONTHLY BUDGET	P 42.6 S 29.8 N 27.7	P 65.0 S 10.0 N 25.0	P 42.1 S 28.0 N 29.9	P 55.9 S 29.4 N 14.7
SELECT INBOUND/OUTBOUND TRANSPORTATION	P 25.5 S 35.3 N 39.2	P 41.2 S 5.9 N 52.9	P 22.6 S 38.7 N 38.7	P 28.7 S 57.6 N 15.2
EVALUATE SUPPLIERS/DEVELOP NEW SOURCES	P 48.1 S 30.8 N 21.2	P 52.9 S 29.4 N 17.6	P 63.4 S 30.9 N 5.7	P 45.2 S 41.9 N 12.9
ISSUE PURCHASE ORDERS AND CHANGES	P 36.7 S 28.6 N 34.7	P 18.8 S 31.3 N 50.0	P 29.4 S 46.8 N 23.9	P 25.0 S 31.3 N 43.8
SELECT SOURCES OF RAW MATERIALS/SUPPLIES	P 50.0 S 28.0 N 22.0	P 43.8 S 31.3 N 25.0	P 56.3 S 34.5 N 9.2	P 41.9 S 35.5 N 22.6
EXPEDITE ORDERS/DELIVERIES	P 19.6 S 39.1 N 41.3	P 35.3 S 23.5 N 41.2	P 17.9 S 50.0 N 32.1	P 21.9 S 43.8 N 34.4
MAINTAIN PURCHASING RECORDS	P 22.4 S 46.9 N 30.6	P 30.8 S 23.1 N 46.2	P 34.3 S 37.0 N 28.7	P 19.4 S 35.5 N 45.2

buyer trainees, expediters and junior buyers need a minimum of a high school diploma, according to a majority of our respondents; from there on up the purchasing ladder, college is required by half or more of the companies.

What else does it take to get ahead in the world of purchasing? We asked what influenced purchasing salaries—and how much impact those aspects had, with the following results: performance was cited as having the most impact by 69.4%. Education received responses ranging from "some impact" to "almost no impact" by 77.1% of the audience. On a scale of 1-5 (with 1 being *most* impact) 41.1% gave experience a 2 and 26.9% gave it a 3. Another criterion mentioned was profit, which received a 35.1% endorsement.

Once again, as in years past, purchasing people have expressed satisfaction with their jobs—average turnover rate in purchasing departments across the land registered in at 0-5% for 81.9%.

After all is said and done, these numbers can be grasped pretty simply by taking a look at one category, the purchasing manager. On average, he (not she) earns $41,484 (plus a bonus reflecting his year's performance), has just over 13 years' experience and a four-year college degree. He's almost 40 years old, is satisfied with his job, and has expectations (predicted before Black Monday) of a 5% raise in 1988. **PW**

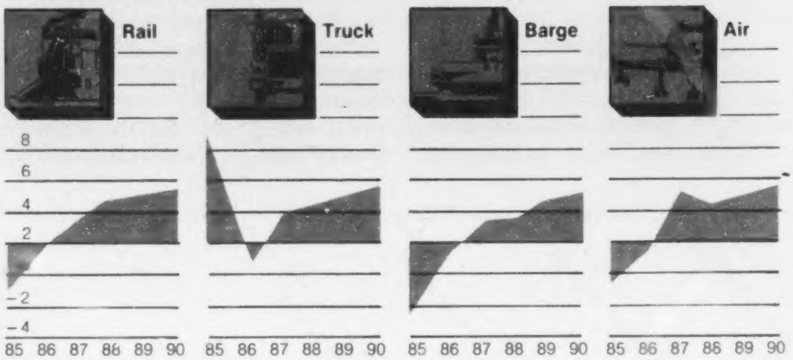
Purchasing Manager	Materials Manager	Purchasing Agent	Senior Buyer	Buyer	Jr. Buyer	Expeditor	Buyer Trainee
P 74.4 S 21.5 N 4.1	P 29.2 S 37.5 N 33.3	P 48.4 S 34.1 N 17.6	P 32.3 S 47.3 N 20.4	P 14.0 S 38.8 N 47.3	P 6.8 S 18.2 N 75.0	P 0.0 S 11.6 N 88.4	P 0.0 S 11.8 N 88.2
P 65.0 S 30.8 N 4.3	P 30.4 S 39.1 N 30.4	P 64.2 S 30.5 N 5.3	P 62.0 S 33.7 N 4.3	P 51.7 S 40.8 N 7.5	P 32.6 S 37.0 N 30.4	P 6.8 S 25.0 N 68.2	P 5.6 S 38.9 N 55.6
P 63.0 S 29.4 N 7.6	P 52.2 S 26.1 N 21.7	P 39.1 S 43.7 N 17.2	P 36.4 S 51.1 N 12.5	P 26.6 S 42.2 N 31.3	P 11.6 S 44.2 N 44.2	P 4.8 S 19.0 N 76.2	P 0.0 S 52.9 N 47.1
P 39.8 S 24.8 N 35.4	P 13.0 S 26.1 N 60.9	P 17.1 S 25.6 N 57.3	P 15.2 S 26.6 N 58.2	P 9.8 S 20.5 N 69.7	P 2.4 S 16.7 N 81.0	P 2.3 S 4.7 N 93.0	P 5.9 S 23.5 N 70.6
P 70.3 S 22.9 N 6.8	P 32.0 S 28.0 N 40.0	P 31.3 S 20.5 N 48.2	P 14.8 S 29.6 N 55.6	P 2.5 S 15.8 N 81.7	P 0.0 S 12.5 N 87.5	P 0.0 S 2.4 N 97.6	P 11.1 S 5.6 N 83.3
P 58.8 S 34.2 N 7.0	P 56.0 S 24.0 N 20.0	P 49.5 S 40.0 N 10.5	P 40.2 S 46.7 N 13.0	P 35.3 S 46.8 N 18.0	P 16.7 S 41.7 N 41.7	P 15.9 S 18.2 N 65.9	P 11.1 S 22.2 N 66.7
P 55.3 S 29.8 N 14.9	P 81.8 S 6.1 N 12.1	P 42.4 S 42.4 N 15.3	P 26.5 S 43.4 N 30.1	P 27.7 S 42.3 N 30.0	P 4.9 S 36.6 N 58.5	P 4.7 S 27.9 N 67.4	P 0.0 S 43.8 N 56.3
P 35.8 S 31.1 N 33.0	P 72.2 S 16.7 N 11.1	P 27.7 S 30.1 N 42.2	P 12.2 S 29.7 N 58.1	P 18.1 S 29.9 N 52.0	P 10.0 S 20.0 N 70.0	P 11.6 S 14.0 N 74.4	P 5.9 S 23.5 N 70.6
P 23.8 S 41.0 N 35.2	P 30.8 S 46.2 N 23.1	P 34.9 S 27.9 N 37.2	P 19.8 S 33.3 N 46.9	P 26.0 S 34.4 N 39.7	P 18.2 S 27.3 N 54.5	P 7.5 S 35.0 N 57.5	P 6.3 S 31.3 N 62.5
P 75.6 S 23.5 N 0.8	P 33.3 S 41.7 N 25.0	P 76.8 S 18.2 N 5.1	P 78.4 S 18.6 N 2.9	P 66.0 S 27.5 N 6.5	P 54.0 S 26.0 N 20.0	P 7.1 S 23.8 N 69.0	P 22.2 S 27.8 N 50.0
P 57.7 S 34.2 N 8.1	P 23.1 S 26.9 N 50.0	P 80.2 S 12.9 N 6.9	P 88.2 S 7.8 N 3.9	P 89.0 S 9.8 N 1.2	P 81.4 S 13.6 N 5.1	P 36.2 S 34.0 N 29.8	P 54.2 S 37.5 N 8.3
P 70.7 S 25.9 N 3.4	P 27.3 S 31.8 N 40.9	P 67.4 S 29.5 N 3.2	P 77.6 S 15.3 N 7.1	P 69.1 S 23.0 N 7.9	P 54.7 S 20.8 N 24.5	P 18.8 S 27.1 N 54.2	P 11.1 S 44.4 N 44.4
P 31.1 S 59.2 N 9.7	P 24.0 S 32.0 N 44.0	P 55.4 S 38.0 N 6.5	P 58.0 S 39.0 N 3.0	P 77.0 S 20.6 N 2.4	P 62.3 S 31.1 N 6.6	P 92.8 S 5.8 N 1.4	P 52.0 S 44.0 N 4.0
P 45.3 S 43.4 N 11.3	P 17.4 S 30.4 N 52.2	P 56.5 S 33.7 N 9.8	P 53.6 S 42.3 N 4.1	P 66.9 S 28.6 N 4.5	P 60.7 S 34.4 N 4.9	P 76.7 S 16.7 N 6.7	P 75.9 S 17.2 N 6.9

Wharton transportation report

Freight rates edging up modestly

Freight cost outlook by mode

(Percent increase over previous year)



Source Wharton Econometric Forecasts

Freight rates are beginning to edge up.

To be sure, increases have generally been quite modest—averaging out in the three to five percent range for key transportation modes. Nevertheless, the boosts do represent a change from 1986 when the average freight bill moved up, almost imperceptibly, by only about one-and-one-half percent.

The estimates for future increases, part of Wharton Econometric's quarterly transportation review, prepared especially for *PurchasingWorld* readers, are in part due to increasing demand and in part to somewhat higher carrier operating costs. On the latter score, Wharton analysts note moderately higher outlays for both labor and energy.

Increases hover at five percent

The big econometric forecasting firm paints a rosy picture (at least as far as shippers are concerned) for the next few years. They see only modest acceleration in overall freight rates over the 1989-1990 period with gains over those three years put at 4.2, 4.9 and 5.4%, respectively.

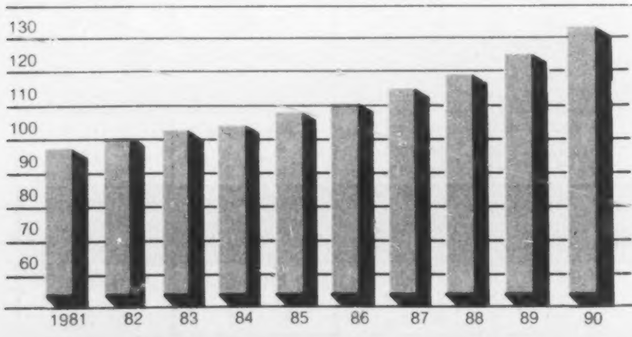
The firm's forecast is consistent with that made three months ago. Then, the 1988 and the 1989 projections came to 3.7 and 5.0%, respectively.

Why the optimism on the rate front—optimism which indicates that increases won't be any greater than those anticipated for overall industrial prices? Two factors are suggested: one, lingering overcapacity; and two, healthy intra- and intermodal competition.

Such generalizations tell only part of the story. Individual modal trends are expected to shape up along the following lines:

PurchasingWorld freight rate index

(1982 = 100)



Increase over previous year	
1981	11.0%
1982	2.0%
1983	3.0%
1984	0.5%
1985	4.8%
1986	1.4%
1987	4.0%
1988	4.2%
1989	4.9%
1990	5.4%

* Estimated

- **Trucking:** Year-to-date tonnage, according to the American Trucking Association, us up close to 7%. This growth would seem to indicate continuing inroads into the markets of other transportation modes, since industrial production has been rising at only a 4-5% rate over the same period.

Price increases for the trucking industry overall should average out at about 4.1% this year as fuel costs increase. Signs of the times: one, the likelihood of a new 3.25% general rate increase sticking this fall, and, two, a rise in the minimum shipping charge (from $35. to $36.25).

As for the longer pull, competitive pressures should hold next year's increase to 4.3%. But in 1989 and 1990, mounting costs will push through to freight rates which are projected to advance 5.0 and 5.5%, respectively.

- **Railroads:** Freight volume has picked up to the point were year-to-date figures are running about 4% above comparable year-ago levels. Shipments of grain, coke and metallic products are up substantially, but auto shipments are off.

Also, piggyback traffic is now advancing slower than overall freight—indicating that the big shift to this approach is over. In any case, TOFC/COFC traffic is up only 3.2% so far this year.

Shippers using piggyback and truck combinations should benefit from a recent ICC decision allowing Union Pacific to acquire Overnite Transportation; the first rail acquisition of a less-than-truckload

Survey of the month

1988 price trends—costs up, but only slightly

Top buying executives are not overly concerned about the magnitude of near-term price increases.

Sure, a new *PurchasingWorld* nationwide survey of purchasing managers suggests that there will be some increase in the overall rate of advance for the goods and services they buy. But, by and large, the acceleration is expected to be quite modest. Not one single respondent anticipates any return to the double-digit rates of a few years back.

Why the hold-the-line optimism? Actually several factors are indicated. These include ample capacity in most sectors, relatively restrained wage and other cost increases, a continuing fair amount of foreign competition, purchasings' resistance to big boosts, and just so-so demand pressures.

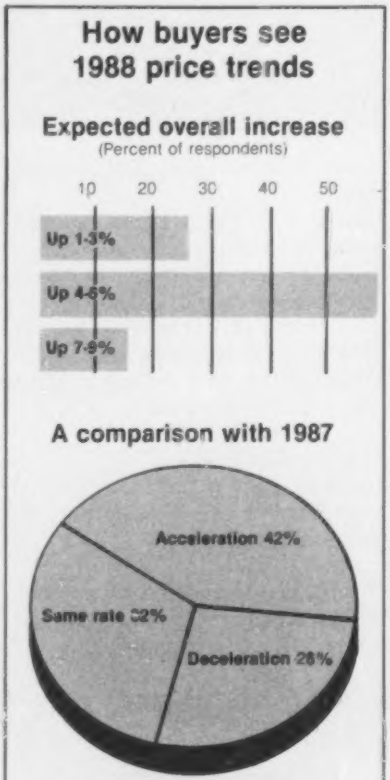
On the latter score, most PMs see only moderate advances in their overall purchases—with any earlier projections calling for really big gains erased by the recent stock market tumble.

Taking off on this latter point, one East Coast buyer feels that the stock market price impact will be felt mostly in the sensitive raw material sector. As he puts it, "even fractionally smaller growth could knock one or two percentage points off what we would otherwise be paying for metals, chemicals, and a host of other basic inputs."

A more detailed rundown on the new survey's basic findings follows:

- **Overall 1988 price trend:** Procurement costs are expected to rise about 5% over the new year—only about one-half a percentage point over this year's estimated 4.5% increase. Moderation is also indicated by the fact that 42% of the respondents anticipate price acceleration—with the remaining split as follows: 32% predict the same rate of increase and 26% see some deceleration.
- **Sector by sector:** Raw materials are expected to be up about 5.4% next year—only fractionally above the 5.2% estimate made for 1987 advances.
- **Product by product:** Items singled out as possible candidates for higher-than-average increases include chemicals, plastic resins, semiconductors, steel, cast iron products, nonferrous metals, corrugated containers, electric motors, and petroleum products. Computers are about the only area where some price erosion is expected.

But buyers are fighting back, attempting to parry any further upward thrust. One popular approach: pressing for more price guarantees. In some cases, they say they've been able to lock in quotes for as long as a year.



How buyers see 1988 price trends

Expected overall increase
(Percent of respondents)

A comparison with 1987

Sector-by-sector trends
(Percent increase 88/87)

Source: PurchasingWorld

Several have also been putting more emphasis on reducing the number of suppliers in order to get more buying clout. The big pluses, they say, are lower prices, better quality, and generally improved servicing.

Others are taking the exact opposite tack—searching around for more low-cost producers. These people feel there is no substitute for competition, with the more suppliers bidding for your business, the more likelihood of getting a better deal.

There's much more agreement on other purchasing strategies—including emphasis on long-term contracts and blanket orders, more consignment shipments, the demanding of detailed cost justification for proposed price increases, and working more closely with vendors to reduce production costs. The latter suggests that Value Analysis, though around for decades, is still a viable alternative.

Nor are imports being forgotten. Several PMs point out that while the dollar has deteriorated *vis a vis* the currencies of Western Europe and Japan (thereby forcing increases in import prices), there are still plenty of other countries in Asia and Latin America where our currency has pretty much held its own.

The hefty price boosts in some basic metals is also prompting a few PMs to look more closely at the futures market. One copper buyer, for example, says this "hedging" has managed to save his company hundreds of thousands of dollars this year.

The near-term situation is perhaps best summed up by a midwestern PM. He feels that while he can't prevent increases, he can at least try to keep them under the all-industry average. His target for 1988: About a 3.5-4% cost increase for his overall purchase mix—about one percentage point under advances suggested by current econometric projections of the items he buys. ***PW***

Wharton Transportation report

...continued from pg 44

(LTL) carrier. And it's unlikely to be the last. The move has been hailed as a realistic appreciation that railroads have to offer the flexibility and door-to-door service that truck freight can provide. Only this will allow them to compete in the handling of non-bulk commodities in this age of just-in-time inventory management.

Rate increases here look to remain tolerably small—with this year's average advance put at only 3.8%. for 1988 through 1990 increases of 4.3, 5.0 and 5.2%, respectively, are expected.

▪ **Air freight:** Traffic has been up dramatically this year. According to the Air Transport Association, domestic cargo is close to 9% ahead of last year (freight is up nearly 10% and mail up 6%).

Rate increases here are also likely to be comparatively high this year with much of the advance attributed to healthier demand levels. Next year rate gains will abate a bit, with the increase put at 4.5% Increases of 5.0 and 5.3%, respectively, are expected for 1989 and 1990.

▪ **Water:** The industry appears to be leveling off after a 10-year decline that claimed a large number of operators as victims. Survivors are much stronger, and both grain and chemical traffic has begun to pick up.

Nevertheless, the industry's rates will continue to be held down by the huge, albeit shrinking, surplus of barges that could still take years to work off through scrappage. Therefore, water freight rates will continue to show the smallest gains of the transportation services.

This year, for example, rates are expected to increase 3.8% and next year's advances will be almost the same. Even in 1989 and 1990, when the general price and wage level will be growing at a relatively fast clip, rate growth will be limited to 4.4 and 4.8%, respectively. ***PW***

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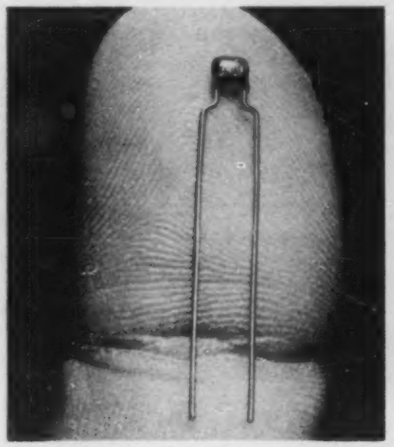

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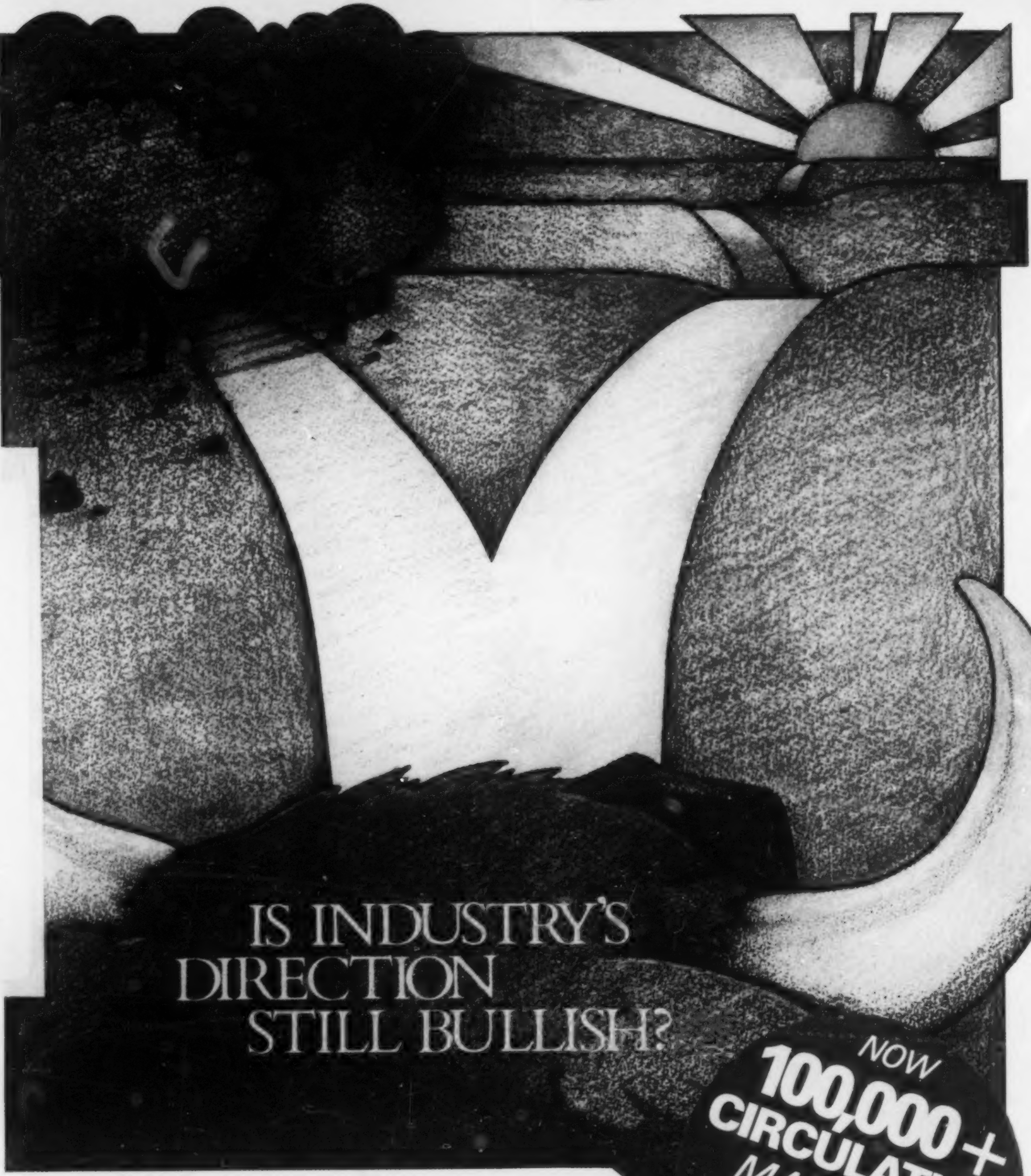

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January 1988 Vol. 32 No. 1

Special report: Forecast '88

30 More good than bad
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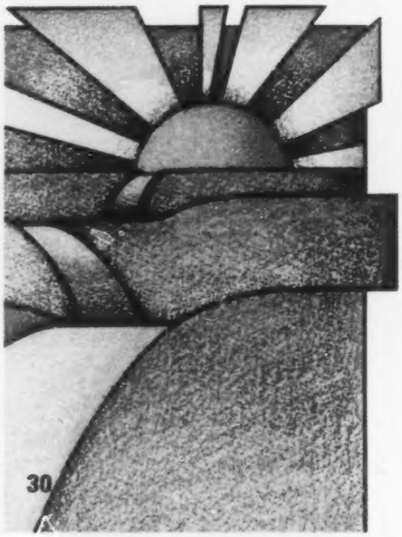

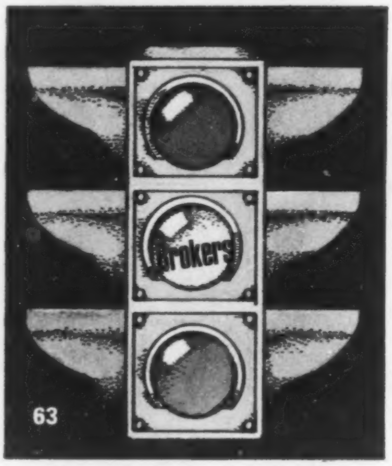

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Illustration by Ray Moore, Cleveland, OH

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PW PREDICTS

Robert S. Reichard, executive editor

Price inflation here, but it can be managed

By and large, industrial buyers should have enough bargaining leverage to keep price accelerations to relatively modest proportions in 1988.

If there's any doubt on this score, take a look at the varying perspective on prices contained in *PurchasingWorld's* special "Forecast '88" section which begins on page 30. Some of the findings are:

- **Purchasing:** A new *PW* survey suggests industrial procurement tags will rise about 5-6%. But another study (this one by the NAPM Business Survey Committee) puts the increase at only 3.6%.
- **Economists:** Dr. Roger Williams, *PW's* new economic consultant, and Wharton's Dr. Nariman Behravesh are also both calling for only moderate price increases. Looking at the all-inclusive GNP deflator, their projected 1988 increases are 4.0% (Williams) and 3.4% (Behravesh).
- **Top management:** Corporate executives offer perhaps the most optimistic forecast of all. They expect the prices of the goods they sell to rise by just a shade under 3%.
- **Econometric:** The little black boxes which spew out forecasts based on hundreds of complex mathematical equations tell much the same story. *PW's* rundown of three top models points to average gains of only 3.6% as far as the GNP deflator is concerned—and only a bit larger 3.7% gain for producer goods, including farm.

And what's true of averages is true of most individual sectors. Thus DRI, which has supplied *PW* with detailed forecasts of some 25 product lines, shows not one single item advancing by much more than 6%. This across-the-board moderation is also confirmed by the top managers' report from DRI. Not one of the 17 manufacturing categories studied is expected to sport more than a 5% or so price increase.

Some rise in the rate of price increases is almost inevitable for three basic reasons: rising labor costs; closer-to-capacity operations, and the weaker dollar. While operating rates are rising, they are still only in the 81% range—below the 85% level that usually signals the beginning of endemic shortages.

As for labor costs, the expected 1988 advance for non-farm production workers should be only in the order of 3.5%; just about one percentage point above 1987.

There are some other moderating factors as well. Some key manufacturing sectors remain in the doldrums. The auto and machine tool sectors are still stuck with over-capacity and strong foreign competition.

Foreign suppliers are still in the picture despite the lower dollar. This serves as a safety valve for availability and as insurance against any price spiral.

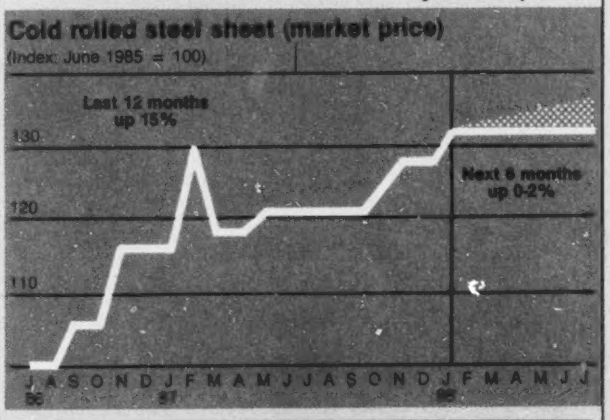
Steel supply to loosen in 1988

CURRENT SITUATION: It's been a hectic year for steel buyers. Not only have lead times stretched but prices have moved up—certainly more than indicated by Uncle Sam's overall index. PW's estimated transaction price increase for cold-rolled sheet is up 15% over 1987. Nor is the advance running out of steam—with recent hikes noted for oil country, tubular goods, stainless bar, stainless flat-rolled products, electrical steels, selected structurals, and carbon plate.

DEMAND: Some 73 million tons of domestic steel probably cleared the market over the past year—up nearly three million tons from 1986. But some modest fall-off is likely over the new year—with total shipments hard put to top the 70 million ton range. **The basic reason: Weakness in autos and housing.** This should more than offset projected increases in the machinery, oil equipment and rail sectors.

SUPPLY: Current tightness should give way to an easier situation by mid-1988 because of lower demand, the resolution of production problems in U.S. mills, and the end of inventory accumulation. Imports can also be expected to supplement the supply—with more than 18.5 million tons expected in 1988—not much under this past year's 20 million tons.

PRICE OUTLOOK: While further scattered increases are likely, the worst of the runup seems over. Reason: The anticipated leveling off or decline in demand. Orders for cold-rolled sheet have already eased. There are exceptions like plate which could remain tight. But market factors suggest little more than a 2% increase in overall steel mill product tags through mid-year. **Another factor behind this moderation: Improved mill profit statements.** Recent price hikes have put most firms back into the black—with an assist from the fact that production costs have been cut 30% over the past five years.



Cold rolled steel sheet (market price)

(Index: June 1985 = 100)

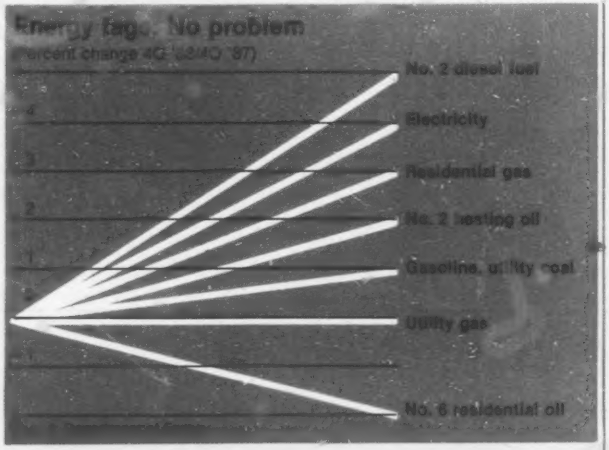
Energy prices

Figure on little or no significant energy inflation over the new year. That's the good news from Department of Energy analysts who base their projections on $18.50/bbl crude petroleum over the next 12 months.

Less-than-sensational demand is also likely to put a lid on any increases. Oil use over 1988 is expected to remain relatively unchanged (at 16.5 million bbl/day). And even when other forms of energy (coal, gas, and electricity) are added, the average overall 1988 consumption gain is put at only 1.6%.

As for individual product lines, the near-term outlook is shaping up like this:

- Gasoline: The average price (all grades and services) should be near 99¢/gal over the new year—with pump tags unlikely to go over $1.02/gal even during the strong summer driving season.
- Heating oil: Little change is seen at the wholesale level where quotes should average in the 52-54¢/gal range. But retail prices, more sensitive to seasonal factors, could go as high as 85¢/gal during the current (first) quarter.
- Residual oil: Plan on a relatively flat $18/bbl average for overall 1988—pretty much unchanged from this past year's $17.80/bbl estimate. Demand could again edge lower—falling another 2.5% in 1988.
- Natural gas: Prices will be up about 3%. Demand, however, could advance about 2.5%, reversing a 1987 drop of the same magnitude as industrial consumption moves up.
- Coal: Excess capacity will hold the price advance to about 1%. Demand will be up 1.2%—but somewhat higher consumption gains are seen for coking and general industry grades.
- Electricity: Residential rates will rise slightly in excess of 3% (to an average of 8.04¢/kwh). Factors behind this increase: A 2% increase in fossil fuel tags and rising capital costs.



Copper

Prices could be about to level off after the near doubling of the past year. True, demand is still good and producer inventories are quite low (especially for high grade material). Best bet: A back and filling around current levels until around midyear. After that, some erosion from current sky-high levels seems likely as more production from Chile, the Phillipines, Mexico, and the U.S. hits the market. On the latter score, the Bingham, UT mine will see its first year of full production—and Phelps Dodge will produce an additional 80 million tons as its solvent extraction electrowinning expansion program continues.

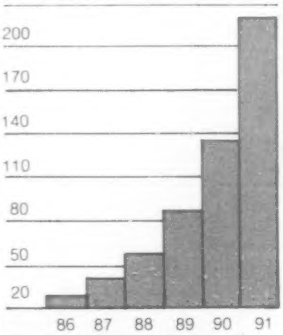
Ethylene

First quarter contract prices are moving up into the low 20s range—up as much as 3.5¢/lb from late 1987 readings. But the feeling is that the runup, which has seen tags rise from the 13.5¢/lb low of July, may soon run out of steam—especially if crude oil prices edge lower. In fact, one big buyer thinks that producers are posting the new round of advances to insure their having enough base price from which to discount when the market softens later on this year.

Aluminum

The light metal is taking a breather after zooming up by more than 30¢/lb over the past year—from just over 50¢/lb to the current 80¢/lb plus level. Producer inventories are at their lowest levels in 13 years. But any further significant rises seem doubtful. Some softness could develop as the year wears on and more capacity comes on stream. Demand gains won't be quite as spectacular as they've been. The domestic industry, for example, is now talking in terms of a 1-2% shipment increase over the new year.

EDI service sales
(Millions of $)



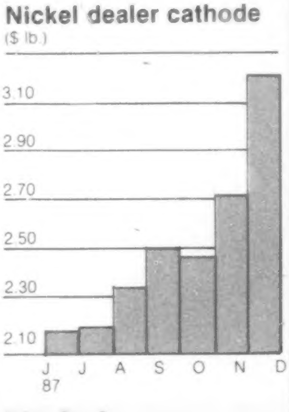
Source: Link Resources Corp

Electronic data interchange

EDI (the transmission of information between computers using highly standardized electronic versions of common business forms) continues its rapid (near 50% a year) growth pace. A new projection by Link Resources Corp. of New York sees revenue for these services rising from only $39 million last year to over $220 million by 1991. The number of using firms is expected to grow at the same pace. More significant, EDI, which was initially developed for transportation, is now spreading rapidly to heavy manufacturing. In any event, producers moving to JIT delivery systems are increasingly using EDI as the electronic lifeline to tie their systems together.

Polyethylene

Recently posted increases have been holding up fairly well—with both low- and high-density grades commanding anywhere from 35-40¢/lb. And more early 1988 boosts have already been announced. These January increases, ranging as high as 5¢/lb , mean that it should be quite difficult to find very much material for under 40¢/lb this winter. Behind all this bullishness: continuing strong demand and tight supplies. In the high-density sector, for example, a 6% consumption gain over the new year should keep operating rates near the 100% level.


Nickel dealer cathode
($/lb.)

Nickel

Markets have turned buoyant, with dealer cathode now commanding over $3/lb—almost double the $1.68/lb low of the past year. Reason: New supplies over the past 12 months fell about 50 million pounds short of the estimated 1.35 billion pound free-world demand level. High operating rates, put at nearly 91% for the new year, have to be regarded as still another bullish factor. As such, prices are expected to remain firm to higher through spring. But beyond that some leveling off is possible—for overall 1988 demand is not expected to rise very much

Phosphates

A dramatic turnaround is prompting the industry to talk in terms of firmer prices and tighter inventories through the first half of 1988. Tags have already moved up $40-50/ton since last year at this time. And as for inventories, they are currently put at only 900,000 lb —down about 10% from last year. Upshot: Diammonium phosphate (DAP), the industry's principal product, now fetches $173/short ton (U.S. Gulf barge). And more increases are in the works. Export tags are even higher—running in the $185-190/metric ton range (up sharply from the $125-130/ton levels of last year).

Polystyrene

The industry is riding high after a year of record sales and rising prices. As of latest report, for example, the general purpose/crystal grade was fetching near 55¢/lb. That compares to the only 39¢/lb quote of just one year ago. And prices are likely to remain high—as a tight supply keeps tags of styrene monomer up in the high 40¢/lb range. New polymer capacity coming on

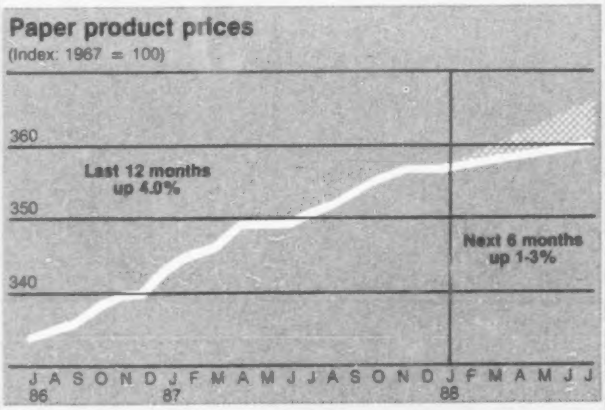
Paper demand and prices increase

CURRENT SITUATION: Strong demand and rising prices have been the case for over a year now. On the price front, recent boosts have hit bleached board, linerboard, corrugated boxes, kraft paper, grocery bags and sacks, printing and writing paper, newsprint, and pulp. Demand has been equally strong—**pushing the 1987 paper and board production total up to over 73.7 million tons.** That's a gain of nearly 4%—on top of 1986's 5.6% advance.

DEMAND: Assume a 2-2.5% real GNP advance in 1988—and paper and board production could be up another 2%. Biggest increases are seen for uncoated groundwood where production could rise by about 5-6%. Also faring well will be newsprint (up 4%) and coated papers (up 3-4%). Linerboard should approximate the overall average 2% advance.

SUPPLY: Things remain snug in most sectors. Producers say they have enough new capacity on the drawing boards to prevent any real pinch. Thus these projected industry additions for 1988: newsprint (1.2%), uncoated groundwood (6.2%), coated papers (3.7%), uncoated free sheet (2.3%), unbleached kraft linerboard (2.1%), and solid bleached board (2.0%). These suggest the following 1988 operating rates: newsprint (100%), uncoated groundwood (88%), coated papers (92%), uncoated free sheet (93%), unbleached kraft linerboard (99%), and solid bleached board (95%).

PRICE OUTLOOK: Given the above market scenario, more increases seem inevitable. Over the next few months increases are expected for linerboard, newsprint, tissue papers, and many fine papers. But for the most part these boosts should be relatively modest. Then, too, costs are rising only modestly—and some of this is being offset by impressive productivity gains (5% in 1987). PW equations suggest about **a 1-3% increase in the all-industry average by midyear.**


Paper product prices
(Index: 1967 = 100)

Market outlook for industrial robots

The recent lull in purchases of industrial robots seems over. A study by the Freedonia Group (Cleveland), for example, sees sales rising a strong 22.7% a year through the 1986-1991 period.

The new report puts gains in real or physical volume at 18.1% a year. Superimpose this on the dollar figure, and you end up with a 4.5% annual price advance.

Much of the upward demand impetus is based on an aggressive commitment by U.S. manufacturing industries to adopt and upgrade factory automation techniques. Then, too, robot manufacturers are appealing to non-traditional users—namely the electronics, aircraft, textile, and other industries.

As such, the motor vehicle industry, while remaining the largest end user of these robots, should claim a somewhat smaller share of the total market in the years ahead (25% in 1991 versus 34% in 1986). The auto robot market, however, will benefit from direct investment by Japanese car producers in U.S. manufacturing facilities.

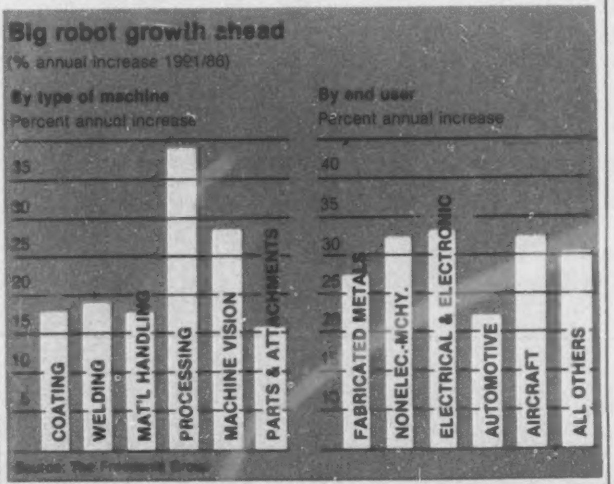
Viewed from a type of equipment vantage point, the biggest percentage gains over the next few years will be in the processing robot and machine vision sectors. The former (including parts finishing, assembly, and inspection) presents tremendous potential for productivity gains and should grow at nearly a 40% annual rate.

The study also points out that imports (mostly from Japan, Sweden, West Germany and France) account for 35% of the U.S. market. The reasons for this is lower prices plus licensing pacts and U.S. marketing subsidiaries that further broaden the distribution of foreign-built robots.

Combine the above with a dip in exports, and the nation had a $125 million robot trade deficit last year. But on a rosier note, this could fall to $100 million by 1991.

Big robot growth ahead

(% annual increase 1991/86)



Source: The Freedonia Group

stream over the new year will still lag domestic consumption increases. This, in turn, suggests another increase in polystyrene operating rates to near 89%.

Zinc

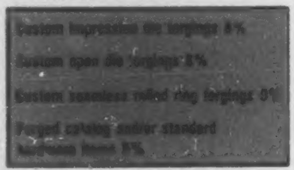
The plating and alloying metal is holding up quite well, despite the end of the strike that plagued last years output. Prices have actually moved up (to near 45¢/lb) in recent weeks—prodded by relatively snug supplies and increased buying by the Chinese. Meantime, consumption also remains moderately upbeat—with global chewup put at 6.85 million tons last year—up 2.5% from 1986. As for the new year, most signs suggest little more than fractional demand gains—with prices expected to move in a rather narrow 5¢/lb range. That's a lot different from the dramatic swings of 1987.

Forgings

This critical U.S. industry, bolstered by a good 1987, is looking forward to an even better 1988. Some of the dollar order gains being projected: 1) custom impression die forgings (up 8% to $2.7 billion); 2) custom open die forgings (also up 8% to $675 million); 3) custom seamless rolled forgings (level after a big 8% gain this past year), and 4) forged catalog and/or standard hardware orders (up 5%). Another plus: More business is returning from offshore because of dollar softness. Then, too, there have been some delivery and quality problems with these imported items.

1988 forging orders

% increase



Source: Forging Industry Assn.

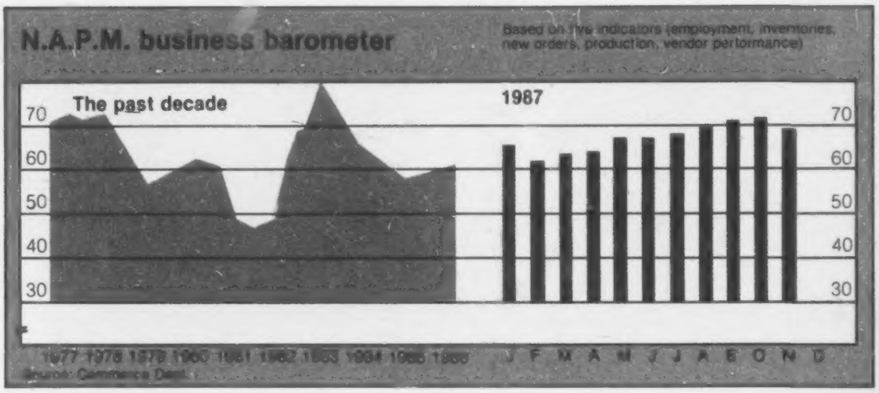
Lead

A modest price decline (2-3¢/lb) still seems a better-than-even bet over the next few months. One sign of weakness: some metal is moving well under official producer lists. Also prices are significantly lower in Europe. Then there's the coming end of the batterymaker lead buying season. Finally, a look at overall 1988 projections leaves a bit to be desired. Free-world use is expected to rise only about 1-2% this year, not nearly enough to offset the increasing supplies that should be coming on the market.

Sulfuric acid

Improved market balance (brought about by a combination of plant closings and record fertilizer exports) is making for somewhat firmer prices—especially in Midwestern and Gulf Coast areas. Generally speaking, quotes have moved up about $5/ton and are expected to hold at the new higher levels. Nor is that the end of the line—an added demand assist comes from the copper industry's expanding use of smelter acid for mineral leaching.

BUSINESS DATATRAK


N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)

Source: Commerce Dept.

KEY ECONOMIC TRENDS

First quarter smooth sailing

Whether or not you buy the rosy economic projections contained in *PW*'s special "Forecast '88" section, one thing is clear: There is not going to be a business downturn soon.

The evidence supporting this upbeat near-term outlook is pretty convincing. For one thing, the NAPM Business Barometer (see accompanying graphs) has been running close to 10 points above the neutral 50 mark for seven straight months.

Another NAPM report shows that 47% of its Business Survey Committee membership now expect 1Q 1988 to top late 1987 levels—more than four times the small 11% who feel some deterioration may be in order.

Many forecasters who slashed their estimates for 1988 growth have been nudging them up again in recent weeks. A new survey of 51 economists shows them upping their 1988 numbers after a sharp downward revision following the stock market crash.

Consumers have not panicked. Sure, sales are under earlier projections. People have apparently decided to base their spending on income rather than assets. Since income is holding up, so have sales.

Sure, sales of luxury items like fur, jewelry, and expensive cars have been hurt. But these aren't the items that count that much when GNP figures are totaled.

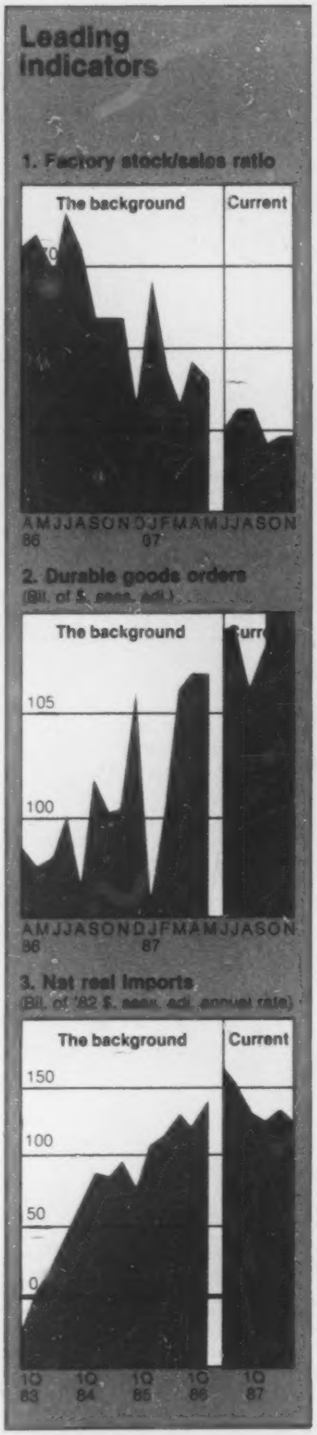
Moreover, there's still other news confirming that some life remains in the now more than six-year-old business upturn. For one, the critical factory stock/sales ratio is now at an all-time low.

The latest reading here (1.59) is some 5% under year-earlier levels—a pretty good indication that factory managers are following through on their "keep'em lean" strategy. If nothing else, it means that as new orders are received, they will quickly be translated into new production.

And these new orders do seem to be coming in at a fairly good clip. At last report, durable factory billings were up over the $110 billion mark for the first time ever. Since sales rose at a slower pace, the backlog of unfilled orders also advanced.

Still another measure closely watched as a barometer of the economy's strength: new orders for nondefense capital goods. This yardstick advanced a strong 1.3% over the latest reported month.

Perhaps the most encouraging near-term sign of all has been the improvement in the U.S. balance of trade. But look at the trade deficit in real terms, and there has been significant improvement. As the last chart on the right indicates, the red ink


Leading indicators

1. Factory stock/sales ratio

2. Durable goods orders (Bil. of $, seas. adj.)

3. Net real imports (Bil. of '82 $, seas. adj. annual rate)

number for 4Q 1987 dropped to $125 billion (in 1982 dollars)—some 18% under year-earlier readings.

Point to keep in mind: This represents a lot of new business that was previously earmarked for overseas producers. More important, because of the lagged effect here—plus the expectation of more dollar declines—this "trade" factor is almost sure to improve further in early 1988.

This, in turn, should keep employment at current levels or even push it up a bit.

What's ahead on the 1988 collective bargaining front

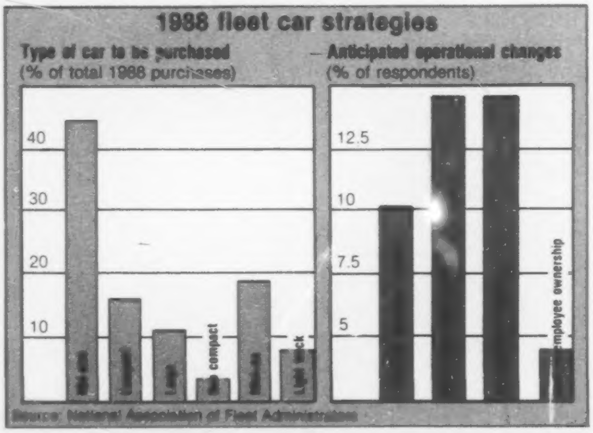
Month	Principal industries	Agreement expirations and/or scheduled wage reopenings.	
		Number of pacts	Workers covered (000)
January	Bituminous coal, oil refining	34	191
February	Food stores, food production	21	65
March	State and local government, trucking	54	497
April	Construction, rubber, real estate management	67	201
May	Construction, clothing manufacturers	94	396
June	State and local government, railroads, construction	230	1,165
July	State and local government, motion picture production	42	120
August	Clothing, local government, electrical equipment	46	248
September	Automobile manufacturers, state and local government, food stores	47	203
November	Transportation equipment, electrical equipment, food stores	24	77
December	Local government	53	161
Total		732	3,380

1988 fleet car strategies

Some national trends worth considering before finalizing 1988 fleet car strategies—based on a new National Association of Fleet Administrators survey of 319 U.S. fleets.

- **Type of car:** Mid-size vehicles are still by far the most popular—and are expected to account for some 44% of all 1988 purchases. The remainder: light trucks (19%), compacts (16%), large cars (11%), minivans (7%), and subcompacts (3%).
- **Ownership:** Some 10% of the respondents say they are likely to lease vehicles that were previously purchased. Another 3% plan to divest most of their fleet and switch to employee ownership.
- **Drivers choice:** More than half those queried will give drivers choice of make. And one third offer model options. But only 11% offer engine-type choice.
- **Imports:** No contest here as less than 1% plan to buy cars built outside North America.
- **Major purchase considerations (in descending order of importance):** Initial cost, serviceability, economy of operation, depreciation/resale, driver satisfaction, administration ease, company prestige. One change from last year: The shift of second and fourth places—with serviceability moving up the ladder at the expense of depreciation/resale.

Also worth noting: of those contemplating operational changes some 14% say they will reduce the number of vehicles in their fleet. And an equal percentage contemplate keeping their cars longer as well as putting more mileage on them before trade-ins.


1988 fleet car strategies

Type of car to be purchased (% of total 1988 purchases)

Anticipated operational changes (% of respondents)

Source: National Association of Fleet Administrators

Labor

It's going to be a fairly busy year on the collective bargaining front. Labor unions don't look to be all that belligerent, but the fact that major contracts involving 3.4 million workers are up for negotiation does seem to suggest that there could be at least a few problems.

Adding to the concern is all the tough talk now coming from management. Specifically, some 72% of those executives queried by the Bureau of National Affairs say they'll try to hold first year increases to 2.4%—adding that if strikes do occur, they may well decide to use non-union workers.

Whatever management's attitude, the sheer number of workers involved (38% of all union workers work in the private sector) would seem to indicate close monitoring. In any case, note these manufacturing sectors with large numbers of workers under contracts slated for 1988 renewal: apparel (230,000 workers), transportation equipment (160,000), and electrical machinery (155,000).

Still other manufacturing industries with big negotiations ahead include food (62,000), lumber and wood products (54,000), petroleum refining (35,000), rubber and plastics (48,000), and nonelectric machinery (43,000).

Private non-manufacturing areas scheduled for contract talks include mining, oil, and gas production (105,000), construction (425,000), railroads (317,000), trucking (195,000), and utilities (90,000).

Nor is there any particular time of year to be extra concerned about. As the accompanying table shows, virtually every month faces busy talk schedules. March and June should be particularly important, since major transportation contracts expire during those months.

This month's breakdown

	Latest level (November)	% change from: Month ago	Year ago
Bearings	358.5	0.1	0.7
Bolts, nuts, etc	279.1	−0.2	0.3
Chemicals, inorganic	294.8	−0.2	0.3
Chemicals, organic	363.8	1.3	12.2
Concrete products	326.7	0.2	0.7
Corrugated cartons	NA	NA	NA
Cutting tools, small	293.6	0.1	0.4
Electric lamps (bulbs)	352.4	0.2	1.6
Electronic components	203.4	0.2	0.2
Fans and blowers	371.5	0.9	0.9
Foundry and forge products	368.0	0.3	1.7
Fuel oil (residual)	623.9	1.8	38.4
Furniture, commercial	329.6	0.1	2.5
Gasoline	406.5	1.0	30.5
Glass, flat	240.6	−0.2	3.2
Glass containers	401.3	0.0	0.1
Gypsum products	305.6	−0.1	−12.9
Hand tools	398.2	0.0	3.2
Hand tools, power driven	242.5	0.2	1.0
Industrial furnaces	403.5	−0.1	1.9
Integrating and measuring instruments	242.4	0.6	2.0
Internal combustion engines	360.0	0.2	1.8
Lubricating oil	350.1	0.3	−0.2
Lumber millwork	334.2	0.0	4.8
Material handling equipment	300.7	0.1	1.2
Metal containers	359.9	0.0	−0.7
Metal mill shapes (nonferrous)	345.1	3.0	15.7
Metal tanks	306.5	−0.1	2.5
Motors and generators	361.9	0.0	2.7
Motor trucks	330.7	−0.6	0.4
Office and store equipment	159.5	−0.3	2.8
Paperboard	311.3	0.2	11.9
Paper boxes and shipping containers	296.8	0.8	8.4
Paper office supplies	245.7	0.4	1.8
Paint	285.9	0.3	1.2
Plastic resins	338.1	0.0	14.6
Precision measuring tools	277.7	0.0	3.2
Pumps and compressors	367.0	0.3	0.9
Refractories	374.6	0.2	1.7
Rubber belts and belting	330.2	0.4	−1.6
Scales and balances	235.8	0.3	1.2
Steel products	367.0	0.5	5.2
Switchgear	291.2	0.0	1.9
Textiles, synthetic fibers	150.8	0.3	1.5
Textiles, gray fabrics	160.9	0.5	7.3
Tires and tubes	232.8	0.0	0.6
Transformers and power regulators	240.6	0.1	1.4
Welding equipment	307.5	0.4	1.8
Wire and cable	228.2	2.3	11.2

CURRENT PRICES

Gradual is the operative word

The modest rise in industrial producer prices is still continuing. Once again the major culprits are basic raw materials such as metals, paper, and chemicals. Some fairly substantial advances in these areas more than offset further scattered softness in the energy sector.

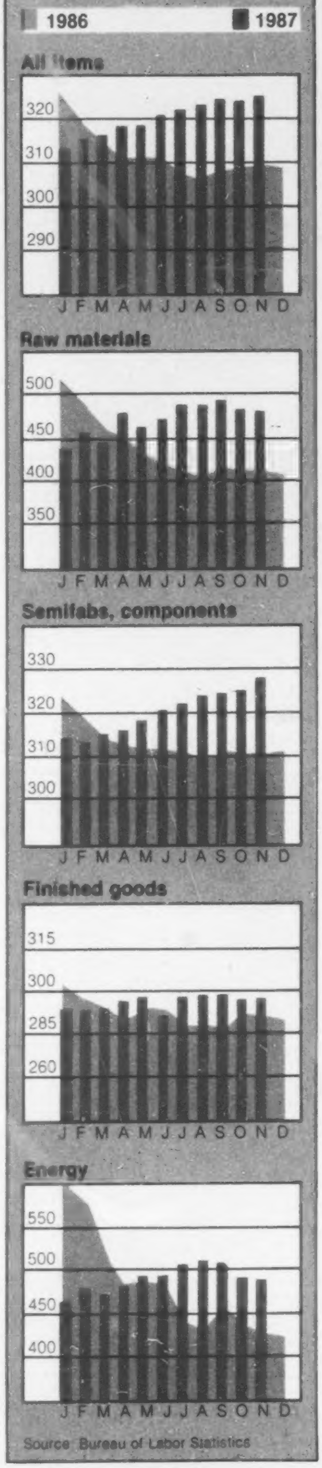
Prices over the past month averaged about 0.2% above the previous 30-day period—the equivalent of about a 2.5% annual rate of rise.

Coming back to individual product lines, nonferrous metals—as in the past few months—continue to be the major culprit, as hefty increases in copper and copper-based products spearheaded a significant jump. Also up over the month were steel mill products and most metal scrap. Aluminum has apparently been leveling off—albeit at very high levels.

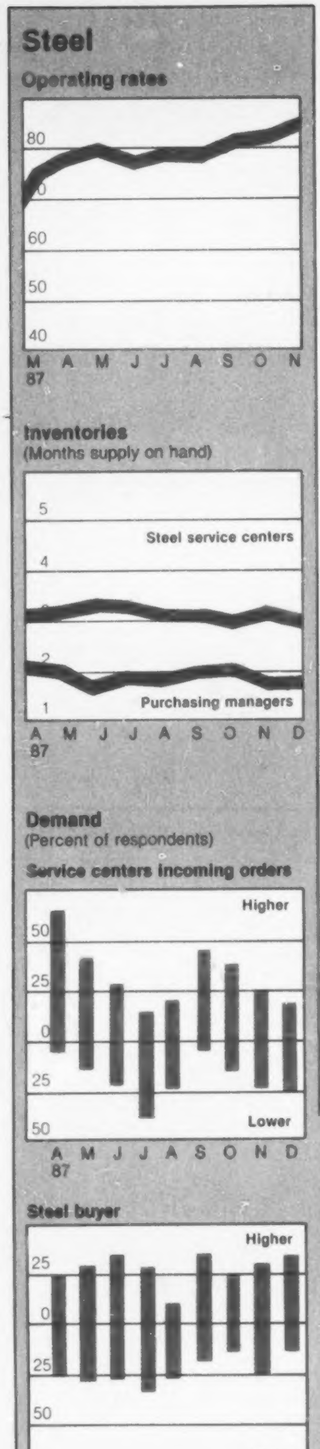
Paper, too, continues to move up the price ladder on a fairly broad front—though the increases in recent weeks have been smaller than those posted this past fall. Biggest increases over the past month were in the fine paper area—though from a year-to-year perspective the heftiest hike has been in paperboard which now runs close to 12% ahead of last January.

Chemicals are also strong—with organics moving up a substantial 1.3% over

Industrial prices
(Index: 1967 = 100)



Source: Bureau of Labor Statistics


Steel

Operating rates

Inventories
(Months supply on hand)

Demand
(Percent of respondents)

Service centers incoming orders

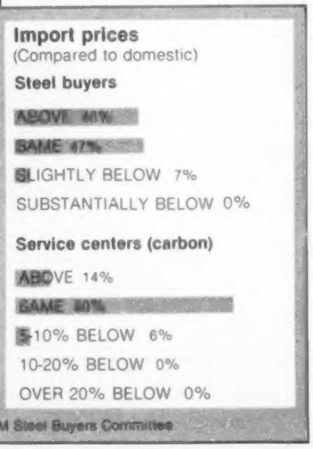
Steel buyer

the past month. Plastic resins took a breather after rising nearly 15% over the past year. But some increases are anticipated in early 1988.

Construction materials also edged up about 0.5% this past month. Only softwood lumber managed to buck the trend which saw boosts posted in plywood, nonferrous wire and cable, heating equipment, plastic construction products, and sand and gravel.

On a more encouraging note, however, has been the continuing drop in energy tags. The decline is tapering off—but it was still enough to knock 0.3% off the energy average last month. Leading the downtrend were natural gas and crude petroleum, which more than offset seasonal advances for heating and residual oils.

Also on the rosy side: The relative stability in machinery and equipment. Last month averages here held steady following a 0.4% fall the previous month. Reason: Still more-than-ample capacity in this sector.


Import prices
(Compared to domestic)

Steel buyers

Service centers (carbon)

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

STEEL SCENE

The big worry list

Tight as a drum—that's the only way to describe the current steel supply situation. Both users and service centers are virtually unanimous on this point.

For the first time in many years, every single product line monitored by the NAPM steel buyer committee is on their "worry" list. As over the past few months, the really big concerns seem to be centered in plate, hot-rolled, cold-rolled, and coated sheet.

Another sign of the times: Only about one in 10 of these same metal buyers now looks forward to problem-free steel procurement in the six months immediately ahead. That's the lowest such percentage in years.

Talks with distributors suggest a similar picture. Steel Service Center Institute (SSCI) President Andrew Sharkey sums it up as follows: "Domestic mills have allocated most sheet and plate production, while the minimills have depleted finished floor stocks of merchant bar and structural, and are generally producing from full rolling schedules of 8-10-week cycles. These circumstances have caused service centers to put in a great deal of purchasing overtime in order to maintain balanced inventories."

As for future demand, the picture is a bit more mixed. Thirty-four percent of queried buyers plan to increase their receipts of the metal over the next few months—more than double the 14% who contemplate smaller buys.

But this has to be contrasted with a somewhat more cautious forecast made by SSCI members. The past month, for example, shows that anticipated declines in orders now top anticipated gains, the first time this has happened since July. True, one month doesn't make a trend, but this is something which will bear watching.

Auto markets have become weaker. And it remains to be seen whether the machinery, oil, appliance, and inventory building sectors can pick up all the slack.

Some inventory gains seem likely—for supplies are low—down under a three-month level in the case of service centers. And replies indicate that now for the first time in years those who feel stocks need some buildup outnumber those who feel further cutbacks may be in order.

Steel user holdings are also way down in terms of current production requirements. Those now attempting to build up inventory levels (21%) outnumber the 14% who see some paring.

Still another area getting a lot of attention these days is prices. Several boosts are slated for this month—and the feeling is that overall costs will continue to climb.

On the service center front, a growing number of SSCI members believe future replacement costs will be higher. Of all members polled, 88% now say these costs will be up over the next six months—with 39% putting the increase in excess of 5%.

This 39% figure is the highest since these statistics first began to be collected a few years back. In any event, it's all a far cry from a year ago when only 9% were anticipating such big boosts.

One reason for these price advances could be the fact that import competition has almost completely dried up. Not one service center reports import price advantages of 10% or more in the carbon and stainless areas. Conversely, 94% of those buying carbon steel and 91% of those buying stainless now report importers quoting the same or higher-than-domestic prices.

And as might be expected, steel buyers are experiencing a similar situation. Nearly all note import quotes running at or above domestic mill levels—in marked contrast to a year ago, when 37% were still getting some kind of overseas price break.

PROCUREMENT STATUS

And only a year ago...

What a difference a year makes.

Last January, purchasing managers were pretty confident about deliveries, supplies, and their ability to keep prices, terms of sale, and other procurement variables under control.

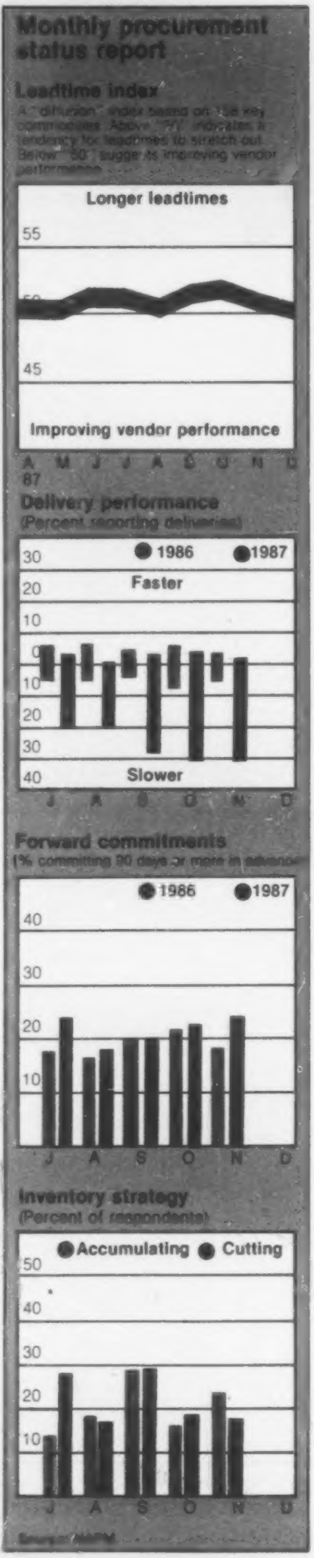
Today things are different. No panic, but lead times are out—particularly in steel, paper, and plastic resins. And the typical PM's bargaining leverage is nowhere near where it was in early 1987.

The numbers from *PW's* monthly procurement report tell the story:

- **Lead times:** *PW's* exclusive lead time index registered another 51 last month—the eighth time in 10 months that the stretchouts outnumbered those coming in.
- **Speed of delivery:** Members of the NAPM business survey committee reporting slowdowns have been outnumbering those getting speedier deliveries for 14 consecutive months. The net differences—negative 29 (as the 31% noting slowdowns overwhelmed the 2% with speedups)—is the largest in over 3½ years.
- **Forward commitments:** PM's committing 90 days or more in advance for production materials have jumped to 25% of surveyed buyers—the highest level in years. Those buying 30 days or less in advance have dropped to 50%—off from 58% two months earlier.
- **Shortages:** The NAPM list has become large—in contrast to the one or two items appearing as late as last winter. Current items on the "worry" list include aluminum (particularly ingot), steel plate, steel pipe, hot- and cold-rolled steel sheets and coil, steel scrap, polypropylene, caustic soda, and titanium dioxide.

The number of buyers reporting price increases is now quite high—with some 56% of NAPM survey committee members being hit with boosts. That dwarfs the 1% who note some reductions.

The figures over the past month or so seem to be plateauing. Several PMs feel industries which have been raising prices (notably paper, metals, and plastics) are finally catching up with their costs—obviating the need for further increases.



Monthly procurement status report

Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.

Delivery performance
(Percent reporting deliveries)

Forward commitments
(% committing 90 days or more in advance)

Inventory strategy
(Percent of respondents)

Source: NAPM

Leadtimes and availability

Chicago: MRO items are expected to hold, but steel remains tight—with ordering impossible without a mill position. Some extensions in coated paper (to 6-10 weeks). Ditto, shrink film bags (6-8). Softwood plywood and framing have come in to 3-4 weeks.

Cleveland: Alloying materials remain available on demand. Ditto, pulp. But plastic compounds are out fractionally (to 2-3 weeks). Other typical leads: Cold-finish aluminum (8), coil coating paint (3), maintenance paint (2).

Houston: Some modest easing is noted in the paper area—with these new lower leads: corrugated (2), kraft (1), and 4-color process printing (3). But extended waits continue for carbon steel tubing (16-18), alloy steel tubing (18-20), and galvanized steel coils (18).

Los Angeles: No real problems in metals, with leads holding at these weekly levels: Galvanized steel (12-14), aluminum tubing (4-6), grey iron castings (5-7), brass castings (8-10), stainless coil (14-16). No stretchouts in electronics either.

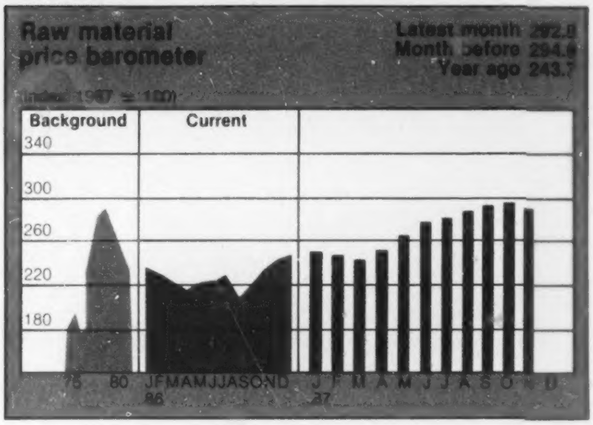
Philadelphia: Several steel items moved out about 2 weeks to the following: Stainless hex bar (14-16) stainless round bar (12-14), carbon hex bar (10-12), carbon round bar (8-10), and stainless round coil (14). Coming in to new waits are standard taps (2-4).

Pittsburgh: Relatively minor changes leave weekly leads as follows: Copper mill products (6), tin (2), lead metal (3), zinc (4), paint (4-5), polyethylene (5), polyvinyl chloride (6) steel strapping (2-3), steel drums (1), and corrugated boxes (3-4).

Leadtimes (in weeks)

	Now	Month ago	Six months ago
STEEL			
Sheet (Phil)	4	4	4
C-R Sheet (Chgo)	11	11	11
Plate (Phil)	10	10	10
Plate (Chgo)	13½	13½	13½
Reinforced (Hous)	6	6	6
H-R Bars (Phil)	5½	5½	5½
H-R Bars (Chgo)	11	11	11
Cold-Drawn Bars (Phil)	9	5½	5½
Galvanized (LA)	13	13	13
Galvanized (Chgo)	12	12	12
Structurals (Chgo)	5	5	5
Structurals (Hous)	13	13	11
Tubing (Phil)	8½	8½	5½
Grey Iron Castings (LA)	6	6	7
Steel Castings (Hous)	11½	11½	11½
Forgings (Hous)	6	6	6
Pipe, Carbon (Hous)	17	17	17
ELECTRIC & ELECTRONIC			
Cables (Chgo)	8½	8½	8½
Capacitors (Chgo)	14	14	16
Circuit Breakers (Chgo)	6	6	6
Electromech. Devices (LA)	7	7	7
ICs (Linear) (Phil)	4½	4½	4½
Motors (Phil)	12	12	9
Motors, 1000 hp & Up (Hous)	39	39	39
Printed Circuit Boards (Chgo)	9	9	9
Relays (Chgo)	15	15	15
Resistors (Chgo)	9	9	9
Resistors, Wirebound (Phil)	5	5	5
Transformers (Chgo)	10	10	10
LUMBER			
Hardwood (Pgh)	3	3	3
Hardwood (Clev)	2½	2½	2½
Plywood (Chgo)	3½	5	3
Plywood (Phil)	1½	1½	1½
Softwood (Clev)	2	2	2
Softwood (Phil)	⅕	⅕	⅕
Softwood (Pgh)	3	3	3
Particleboard (Phil)	2½	2½	2½
CHEMICALS-PLASTICS			
Adhesives (LA)	½	½	½
Naphthalene (Chgo)	2	2	2
Paint (LA)	4	4	4
Paint, Coil Coating (Pgh)	4	4	4
Paint, Maint. (Cleve)	2	2	2
Polyester Resin (LA)	2	2	2
Polyethylene Resin (Cleve)	2½	2½	2½
Polyethylene Resin (Pgh)	4	4	4
PVC Resin (Chgo)	4	4	2
PVC Resin (Pgh)	6	6	6
Titanium Dioxide (LA)	1	1	1
PACKAGING			
Bags, Kraft (Pgh)	5	5	5
Bags, Multiwall (Clev)	9	9	9
Bags, Multiwall (Pgh)	6	6	6
Cartons, Corrugated (Cleve)	2½	2½	2½
Cartons, Corrugated (Hous)	1	2	2
Cartons, Folding (Phil)	6½	6½	6½
Cartons, Folding (Pgh)	3½	3½	3½
Cellophane Wrap (Phil)	5	5	5
Plastic Bags (Pgh)	3½	3½	3½
Plastic Pkg. (Pgh)	3	3	3
Shrink Film (Chgo)	7	6	6
Shrink Film (Clev)	1	1	1
Drums, Fiber (Pgh)	1	1	1
Drums, Steel, Std. (Pgh)	1	1	1
Wood Pallets (Chgo)	2½	2½	2½
Wirebound Boxes (Pgh)	4½	4½	4½
Strapping (Clev)	1	1	1
Strapping (Pgh)	3	3	3
PAPER			
Fiberboard (Clev)	3½	3½	3½
Glassine (Clev)	4½	4½	4½
Glassine (Pgh)	5½	5½	5½
Groundwood (Clev)	4½	4½	4½
Groundwood (Pgh)	7	7	7
Kraft (Clev)	1	1	1
Kraft, Bleached (Clev)	1	1	1
Kraft, Bleached (Pgh)	5	5	5
Kraft, Natural MFNS (Clev)	½	½	½
Laminated (Clev)	8	8	8
Tissue (Pgh)	5½	5½	5½
NONFERROUS			
Aluminum Coil (Chgo)	22	22	19
Aluminum Plate (Chgo)	14	14	14
Aluminum Sheet (LA)	4½	4½	4½
Aluminum Sheet (Chgo)	22	22	19
Brass Castings (LA)	9	9	9
Brass Rods (Chgo)	7½	7½	7½
Brass Sheet (Chgo)	11	11	11
Brass Tube (Chgo)	8½	8½	13
Copper Fittings (LA)	3½	3½	3½
Copper Mill Prod. (Pgh)	6	6	4
Copper Tube (LA)	7	7	7
Copper Tube (Phil)	5½	5½	5½
Lead (Pgh)	3	3	2
Magnesium (Pgh)	2	2	2
Manganese (Clev)	1	1	1
Nickel (Clev)	1	1	1
Nickel (Pgh)	2	2	2
Silicon (Clev)	1	1	1
Tin (Pgh)	2	2	2
Wire, Specialty (LA)	5	5	5
Zinc (Pgh)	4	4	3
MISCELLANEOUS			
Bearings, Domestic (Phil)	2	2	2
Bearings, Foreign (Phil)	26	26	26
Boilers & Furnaces (Hous)	35	35	35
Compressors, Centrifugal (Hous)	50	50	50
Compressors, Reciproc. (Hous)	39	39	39
Fasteners (Chgo)	1½	1½	1½
Fasteners (LA)	8	8	8
Fasteners, Std. (Phil)	3	3	3
Heat Exchangers, Carbon-alloy Steel (Hous)	22	22	21
Heat Exchangers, Hi-pressure (Hous)	25	25	24
Insulation Mat'l. (LA)	7	7	7
Machined Parts (Hous)	9	9	9
Pipes & Valves (Chgo)	1½	1½	1½
Pumps (Hous)	21	21	21
Pumps (LA)	11½	11½	11
Rubber, Synthetic (LA)	2	2	2
Rubber Hose (LA)	4	4	4
Tungsten Carbide Parts (Hous)	15	15	15
Valves, Cast Steel (Hous)	9	9	4
Welding Supplies (Hous)	5	5	5

BUSINESS DATATRAK



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	23.95
Steel, bars, Pitts., cwt.	16.50	16.50	23.95
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	31.00
Steel, plates, Pitts., cwt.	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	28.15	28.15	25.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.810	.810	.520
Antimony, N.Y., dealer, lb.	1.10	1.09	1.16
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	1.84	1.64	1.27
Brass, yellow, [sheet], lb.	1.79	1.59	1.22
Cadmium, N.Y., dealer, lb.	3.00	3.05	0.98
Copper, electrolytic, wire bars, refd., lb.	1.20	1.00	.63
Copper sheet, over 24 in., lb.	1.93	1.73	1.36
Lead, common, N.Y., lb.	.420	.420	.275
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	325.00	355.00	220.00
Molybdenum, oxide, dealer, lb.	2.80	2.79	3.10
Nickel, cathode, dealer, lb.	3.03	2.71	1.70
Platinum, dealer, oz.	510.00	495.00	477.00
Silver, N.Y., oz.	6.92	6.63	5.36
Tin, N.Y., dealer, lb.	3.18	3.23	3.06
Zinc, Prime West, East St. Louis, lb.	.45	.42	.44
Zinc, die casting alloy, No. 3, lb.	.505	.475	.525
PAPER			
Uncoated book #3 offset, ton	890.00	870.00	850.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	17.14	17.17	16.32
Grocery sacks, ton	410.00	410.00	390.00
Solid bleached paperboard, ton	650.00	650.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	380.00	380.00	320.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.274	.271	.227
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.24	1.24	1.06
Cotton middling, 1", N.Y., lb.	.596	.609	.500
Printcloth, 48", 80x80, N.Y., spot, yd.	0.92	0.95	0.90
Army duck, 37", 13 oz., yd.	1.51	1.51	1.40
Blended printcloth, 64", 78x54, yd.	.80	.93	.80
20s combed yarns	1.74	1.98	1.74
Wool 64s, Staple, lb.	3.00	3.00	1.90

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	75.00	75.00	80.00
Benzene, petroleum, tanks, Houston, gal.	0.89	0.90	0.98
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.78	.78	.91
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.36	.36	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.32	.32	.27
Polyethylene resin, low density liner film grade (market place), lb.	.385	.385	.295
Polypropylene, homopolymer grade (market price), lb.	.470	.470	.325
Polystyrene, general purpose grade (market price), lb.	.535	.520	.360
Polyvinyl chloride, pipe grade (market price), lb.	.380	.375	.285
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.40	.40	.23
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	152.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.80	.80	.77
Xylene tanks, gal.	.780	.780	.765
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	333.75	332.60	327.75
Lumber 2x2 pine, mbf, cl	326.35	330.65	316.20
Plywood, plyform, ¾", msf, cl	568.05	575.50	592.35
Plywood, ⅝", msf, cl	394.90	391.45	392.40
Cement, bulk, ton, tl	63.73	63.73	63.28
Sand, ton, cl	7.12	7.12	6.62
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.83	48.88	48.27
Crushed stone, 1½", ton, cl	8.31	8.31	7.83
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.91	0.90	0.84
Gypsum sheathing, ½"x1"x8", msf, tl	225.54	226.69	213.07
Brick, common, per thousand, tl	200.91	198.26	186.51
Asphalt paving, AC-20	140.30	140.30	127.08
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.54	7.52	7.36
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	11.50	14.75	11.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	19.50	19.75	17.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.540	.560	.375
Gasoline, 94 oct., reg., Chi., tank car, gal.	.495	.540	.428
Heating oil, No. 2, Chi., bulk, gal.	.550	.585	.430
Heating oil, No. 2, N.Y., bulk, gal.	.563	.568	.438
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.528	.553	.433
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.260	.260	.240
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	106.00	114.00	79.00
Steel, No. 1 hvy., dlvd., Chi., ton	105.00	115.00	72.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	1.015	.890	.550
Copper, No. 2, East, wholesale buy, dlvd., lb.	.925	.800	.465
Brass, red, East, wholesale buy, dlvd., lb.	.975	.850	.510
Brass, yellow, East, wholesale buy, dlvd., lb.	.405	.365	.330
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.510	.500	.315
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.585	.565	.335
Zinc, old, East, wholesale buy, dlvd., lb.	.20	.20	.20
Lead, clean solids, East, wholesale buy, dlvd., lb.	.265	.265	.165
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	35.00	24.00
Paper, old corrug. box, dlr., N.Y., ton	15.00	20.00	20.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.120	.120	.090
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.23	.23	.10

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

imports and toward domestic sellers—a shift sparked by the decline in the U.S. dollar. Then, too, U.S. exports are beginning to move higher for the same reason.

In any event, some really impressive component demand gains are projected—especially in the semiconductor area. Digital and linear ICs, for example, are expected to be up 19% and 18%, respectively, this year. And even the normally slower-growing "discrete" sector is targeted for an 11% gain.

Nor will gains in passive components be anything to be ashamed of—as overall dollar sales here move up 13% in 1988. But increases in general will be smaller than in semiconductors—except for interconnect components (connectors and printed circuit boards). Also worth noting: Buying of capacitors will remain brisk.

Anavy, in summing up, notes "1988 should be the best year for both equipment and components since 1984—with military buying being the only really notable exception."

Econometric models showing industry outpacing gross national product

The big econometric forecasting models, shrugging off the impact of the recent stock market crash, continue to signal another tolerably good year for 1988.

True, real gross national product (as suggested by averaging estimates supplied to *PurchasingWorld* by Wharton, DRI, and Merrill Lynch—see accompanying table) comes out at only 2.1% for 1988. But that's not bad considering that would make 1988 the sixth straight year of economic expansion.

And even the following year is expected to remain in the plus column. Preliminary projections, for example, indicate an average GNP advance of about 1.8%.

These computer-based numbers also confirm what *PW's* new economic consultant, Dr. Roger Williams of St. John's University, is saying—namely that industrial production will fare better than GNP. Specifically, factory output gains for 1988 and 1989 are expected to average out at 3.2% and 2.2%, respectively.

To be sure, there is some variation among the three models. But the fact that all are positive about GNP and industrial production over the next two years should refute the few purveyors of doom and gloom who still profess to see a recession just around the corner.

The three price indexes forecasted by these same econometric models are also on the encouraging side. They point to only modest price acceleration. The 1988 estimates suggest a manageable situation—with increases varying anywhere from 3% to 4.5% depending on the model and the specific index being projected.

What the big econometric models predict.

Real GNP (% change)	1988	1989
DRI	2.6	2.2
Wharton	2.2	2.2
Merrill Lynch	1.5	1.1
AVERAGE	2.1	1.8
Industrial production (% change)		
DRI	3.8	2.4
Wharton	3.0	2.3
Merrill Lynch	2.7	2.0
AVERAGE	3.2	2.2
GNP price deflator (% change)		
DRI	3.5	4.1
Wharton	3.4	3.9
Merrill Lynch	3.9	5.3
AVERAGE	3.6	4.4
Finished producer prices (% change)		
DRI	4.2	4.5
Wharton	3.1	3.2
Merrill Lynch	3.8	5.9
AVERAGE	3.7	4.5
Consumer prices (% change)		
DRI	4.6	4.8
Wharton	4.2	4.8
Merrill Lynch	4.5	5.6
AVERAGE	4.4	5.1
Prime interest rate (%)		
DRI	8.6	8.0
Wharton	9.2	10.7
Merrill Lynch	8.3	8.6
AVERAGE	8.7	9.1
Unemployment rate (%)		
DRI	5.9	5.8
Wharton	6.1	6.2
Merrill Lynch	6.3	6.6
AVERAGE	6.1	6.2

These new estimates, incidentally, are actually at or below those made a year ago. At that time the three indexes were expected to show 1988 advances ranging as high as 5%. In short, despite all recent talk, the price outlook has not really deteriorated.

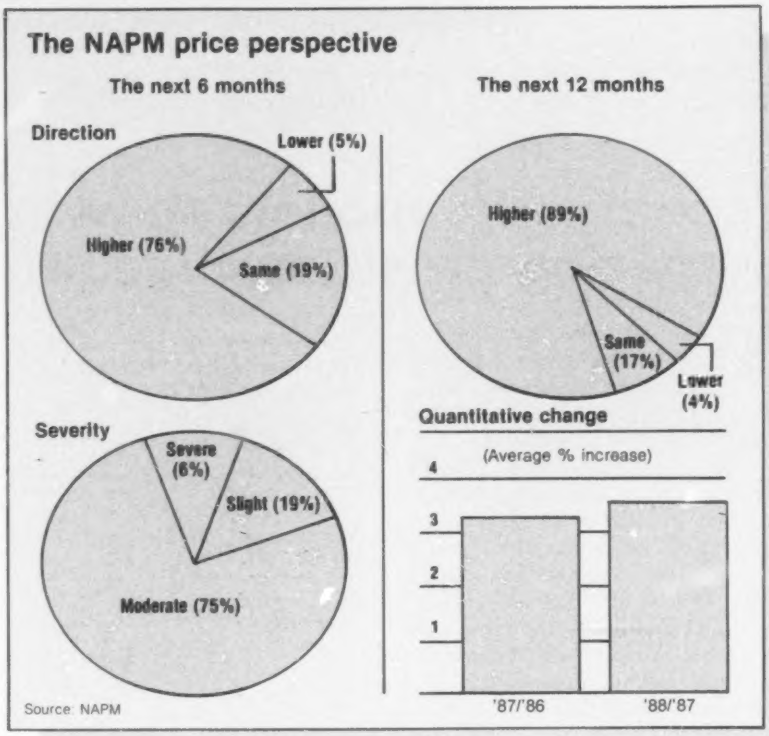
On the other hand, there has been some downgrading of earlier GNP and industrial estimates for the upcoming year. A year ago, the 1988 gains were expected to be 3.1% for GNP and 3.7% for industrial production. Now they are 2.1% and 3.2%, respectively.

A spokesman for one of the econometric forecasting firms explains that the lack of any significant escalation in prices can be traced to two factors: 1) less pressure on materials and supplies than previously anticipated; and, 2) smaller-than-expected wage gains.

As for toning down the 1988 growth estimates, he says that the stock market slide undoubtedly played a role. But he adds that there are other factors operating here, too—namely mandated government spending cutbacks and extremely cautious business buying both in the capital goods and inventory spheres.

Still another possible influence on overall growth trends could be the refusal of the Fed to really ease up on the monetary brakes. Indeed, the prime rate as projected by these models is expected to edge up over the next two years.

Cautious optimism is expressed by NAPM Business Survey group



Source: NAPM

Cautious optimism is the order of the day among the 250 or so members of the NAPM Business Survey Committee.

While the prestigious group does see some pickup in the overall inflation rate, the vast majority of respondents feel that they will be able to live with the increases. And while they aren't ruling out the negative impact of the stock market fall, they feel that gains in capital spending and exports will continue to keep the economy in the plus column.

Some of the survey's more specific findings:

- **Prices:** While most purchasing managers (76%) are bracing for higher prices over the next six months, they feel that the increases will be selective (86%) and moderate or slight (97%) rather than across-the-board or severe.

Looking further ahead, an impressive 89% expect to be paying an average 3.7% more for their goods by the end of 1988. Only 4% expect lower prices and these lucky few put their average decline at near 2.9%. When added to the 7% who see no change, the overall boost in prices for 1988 is put at 3.6%—only slightly higher than the 3.2% figure experienced in 1987.

Commenting on this relatively modest acceleration, Robert J. Bretz, head of the survey committee and director of materials management at Pitney Bowes, says that his group believes that suppliers will go slow on posting further hikes for these reasons: 1) most of the vendor price catch-up from previously depressed years has been accomplished; 2) concern about holding onto newly won market shares; and, 3) still-substantial competition from some overseas suppliers.

- **Capacity and capital spending:** Some half of the respondents say they are now operating at 90% or better of their potential. This is up from 30% a year ago, and is the highest since May 1979. Conversely, the 2% reporting rates under 50% is the lowest since that same year.

Not surprising, capital spending is expected to head higher. Indeed, some 42% of surveyed PMs expect gains—nearly double the 22% who anticipate declines.

- **Export/imports:** Some 58% of firms who export expect to increase the volume of their outgoing shipments in the next six months. That's up significantly from the 50% who experienced an increase over the past two months.

Imports, on the other hand, are likely to remain relatively unchanged. Reasons: locked in contracts and no viable alternate sources of supply, plus the fact that overseas producers continue to absorb much of the price impact occasioned by the weakened dollar.

- **Overall demand:** The figures are surprisingly cheery here. Thus, 52% see first half 1988 topping the second half of 1987. That compares to another 37% who see no change and 11% who anticipate some decline. The second half is expected to be almost as good: 33% expecting further improvement; 48% voting for the status quo; and only 19% looking for some deterioration.

An answer to another question put to the committee suggests that very few are really worried or pessimistic about the overall outlook. Indeed, the 1% who fall into this category is the smallest such reading since 1972. On the other hand, the majority still admit to some concern—with much of that due to the recent happenings on Wall Street.

NAPM's Bretz sums it all up: "PMs are extremely optimistic that the strong economic growth experienced in 1987 will continue in 1988. While they are concerned about the stock market impact on the economy, their optimism is fueled by significant increases in export business. They also expect more price increases—but such increases will be moderate, especially when considering the high level of imports and the continuing decline in the value of the dollar."

Most commodities to rise, some will fall

It looks like an interesting year or two on the industrial price front. While averages won't be rising much (the overall industrial producer price index is projected to advance only 4.9% and 4.5% in 1988 and 1989, respectively), individual product lines could show wide variations—with a few areas like nonferrous metals experiencing scattered declines.

That's what Data Resources, Inc. (DRI) is telling its clients these days—with individual sectors expected to shape up something along these lines:

- **Energy:** Only small advances are anticipated here. Thus after posting an average quarterly escalation rate of 4.3% in 1987, aggregate producer price index for fuels and related products and power registers additional gains averaging out at only 1.4% per quarter in 1988 and 1.5% in 1989.
- **Steel:** The near-term forecast for mill product prices projects annual increases of 5.3% and 4.8% for 1988 and 1989, respectively. Individual product price increases, however, are expected to vary from this average, depending on changes in product markets. For example steel plate, which is currently tight, experienced increases of 8.7% this past year—with gains of 6.9% and 3.0%, projected for 1988 and 1989, respectively.
- **Nonferrous metals:** The tight supply situation in domestic markets is expected to give way to improving availability as new and reopened facilities are brought on stream. But this will coincide with some slowdown in demand.

Upshot: After averaging a strong 5.0% quarterly rate of increase this past year, the producer price index for primary, nonprecious nonferrous metals declines at a 2.6% quarterly rate in 1988. But these prices should stabilize in 1989 as demand improves—with the average quarterly rate of escalation that year put at 0.8%.

DRI also provides some interesting dollars-and-cents forecasts here. By late 1989, for example, the U.S. free-market price for primary aluminum drops to near 66¢ per pound —down more than 25¢ per pound *vis a vis* recent $1 per pound-plus levels.

- **Industrial chemicals:** With crude feedstock prices stabilizing somewhat over the next four quarters, escalation in industrial chemicals is expected to slow—from a strong average quarterly pace of 2.3% in 1987 to just 0.6% in 1988. Though crude oil tags begin to move up in 1989, most of the movement occurs late in the year, so industrial chemicals still post only small gains (0.4% per quarter).
- **Construction materials:** Stronger cost pressures will force producers to raise prices between 4% and 5% for many materials in 1988. Improved demand conditions, combined with more rapid wage escalation in 1989, form the foundation for material price increases in the order of 5% for most products.

For example, valve prices which rose by about 1.2% this past year, will advance 4.6% and 5.2% in 1988 and 1989, respectively. Prices of concrete products which experienced only fractional advances in 1987, should spot sizable increases in 1988 and 1989 (4.0% and 4.5% respectively).

- **Machinery and equipment:** The aggregate producer price index for this category, after increasing only 1.5% in 1987, accelerates—with gains of 3.7% and 4.2% seen for 1988 and 1989, respectively. Reasons: Rising foreign tags endangered by the weak dollar, increasing exports, and a somewhat improved domestic capital equipment buying outlook.
- **Electronic components:** DRI projects production of office computers to increase 11.4% in 1988 and another impressive 7.3% in 1989. Production of communication equipment, another large end-market for electronic components, is expected to rise 9.3% in 1988 and 6.1% in 1989. As a result of this strong demand, increases in the producer price index for electronics are projected to accelerate from the small 0.8% rise of 1987 to 4.0% in 1988 and 5.7% in 1989.

PW readers forecast still rosy

PW readers, shrugging off the recent stock market tumble, remain moderately optimistic about the new year.

To be sure, price increases are expected to be a bit more numerous in the quarters immediately ahead. And availability should remain a problem in a few scattered areas.

But things for the most part seem manageable. More significant, few see any business downturn. Indeed, the vast majority of those queried anticipate respectable demand gains for their companies.

As one PM puts it, "it won't be quite the 'piece of cake' it's been in recent years. But supply and demand should be in reasonable balance—and most of our prices should still be negotiable."

A more detailed rundown on what this wide cross section of industrial purchasing managers expects over the next 12 months follows:

- **Prices:** The average increase in materials and services purchased is estimated to be somewhere in the 5-6% range. That compares to a year ago when replies to a similar survey question suggested only about a 3.5% boost for the then-upcoming 1987.

This increase in the inflation rate is further confirmed by the fact that an impressive 93% of all respondents now expect 1988 increases to top those of the year just ended. Significantly, not one single purchasing manager now says he's budgeting for lower procurement costs.

Moreover, many feel this modest acceleration will continue into the second half of 1988. Thus one out of two see July-December price boosts topping those of the first six months of the year. In contrast, only 14% expect smaller increases at that time—with another 36% anticipating a basically unchanged pace.

■ **Real demand:** One reason for the projected price hikes could be PMs current appraisal of 1988 business. More than four out of every five, for example, expect their firm's activity to top that of 1987. Even more impressive, some 43% expect the increase to be in the 5%-or-higher range—a figure well above that posted by most business forecasters.

Further evidence of business optimism comes from the fact that PMs are betting on continuing GNP advances into late 1988. Indeed, second half advances are now expected to top first half ones—as only 18% see the possibility of a July-December deceleration.

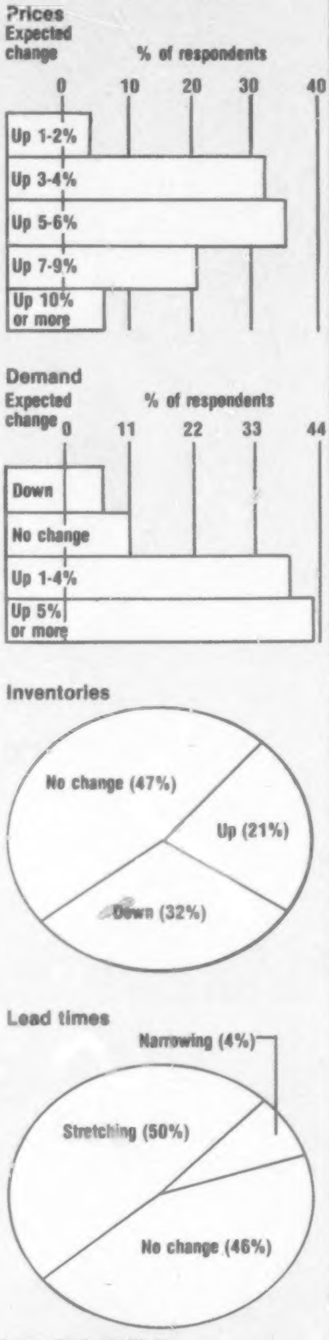
■ **Inventories:** The "keep 'em lean" strategy will continue to prevail. Thus those anticipating some stock paring still outnumber those contemplating additions—despite the good business being projected. It suggests that days' supply will remain at or even under recent levels—with a big assist here coming from the just-in-time stacking approach.

Key product prices into early 1990

(Comparison of first quarter pricing)

Product	Percent change 89/88	Percent change 90/89
Raw materials, energy		
Supplies for manufacturing	4.3	4.3
Processed fuels & lubricants	6.1	5.7
Residual fuels	5.9	9.6
Industrial chemicals	1.3	2.9
Metals		
Steelmill products	4.6	4.9
HR carbon strip	4.9	5.4
Stainless plate	3.7	3.7
Copper cathode	– 2.1	– 1.5
Secondary nonferrous	– 4.3	0.8
Lead	– 14.1	1.4
Aluminum shapes	0.5	4.6
Components		
Rubber & plastic products	3.2	3.3
Pulp & paper	2.3	2.0
Foundry & forge shop products	5.2	4.3
Electronic components	5.6	6.0
Construction products		
Prepared paint	2.7	3.3
Plastic construction products	0.4	3.3
Plumbing fixtures	4.9	3.1
Fabricated structural metals	3.2	4.0
Insulation materials	4.0	5.7
Machinery		
Metalworking machinery	4.6	4.5

Forecast '88: What PW readers see ahead



Source: PurchasingWorld

■ **Delivery performance:** Increasing demand plus somewhat higher operating rates have prompted half of those queried to look for further modest leadtime stretchouts. In contrast, only 4% feel some narrowing is possible—with the remaining 46% expecting a basically unchanged situation.

The lengthening leads are also raising concern about possible supply problems. Some of the product lines where difficulties are anticipated: steel, paper, plastic resins such as polyethylene, polypropylene, and polystyrene, selected chemicals, bearings, integrated circuits, and a few brass mill products.

Other concerns being voiced by purchasing executives include possible inability of their firms to pass through added costs, labor problems, deteriorating transportation (damage and delays), and poor vendor quality.

But despite all the above, the vast majority of PMs queried are confident they can cope. The strategies most often mentioned in this connection: 1) more reliance on just-in-time deliveries; 2) continuing emphasis on long-term contracts with extended price guarantees where possible; 3) narrowing of the supply base for more bargaining clout; 4) closer liason with vendors; and 5) tightening of quality demands.

A few also plan on a little expeditious buying of raw materials which are expected to remain quite volatile. As one buyer puts it, "there'll be ups and downs in these markets—and by timing our purchases right we are confident that we can trim our overall procurement costs by a significant amount".

But overall thinking can probably best be summed up by one Midwestern PM who observes, "it won't be easy. But I fail to see any pervasive bottlenecks. And as far as prices are concerned, increases may be a percent or so more than last year. But that's a heck of a lot better than the double-digit rates of a few years back." **PW**

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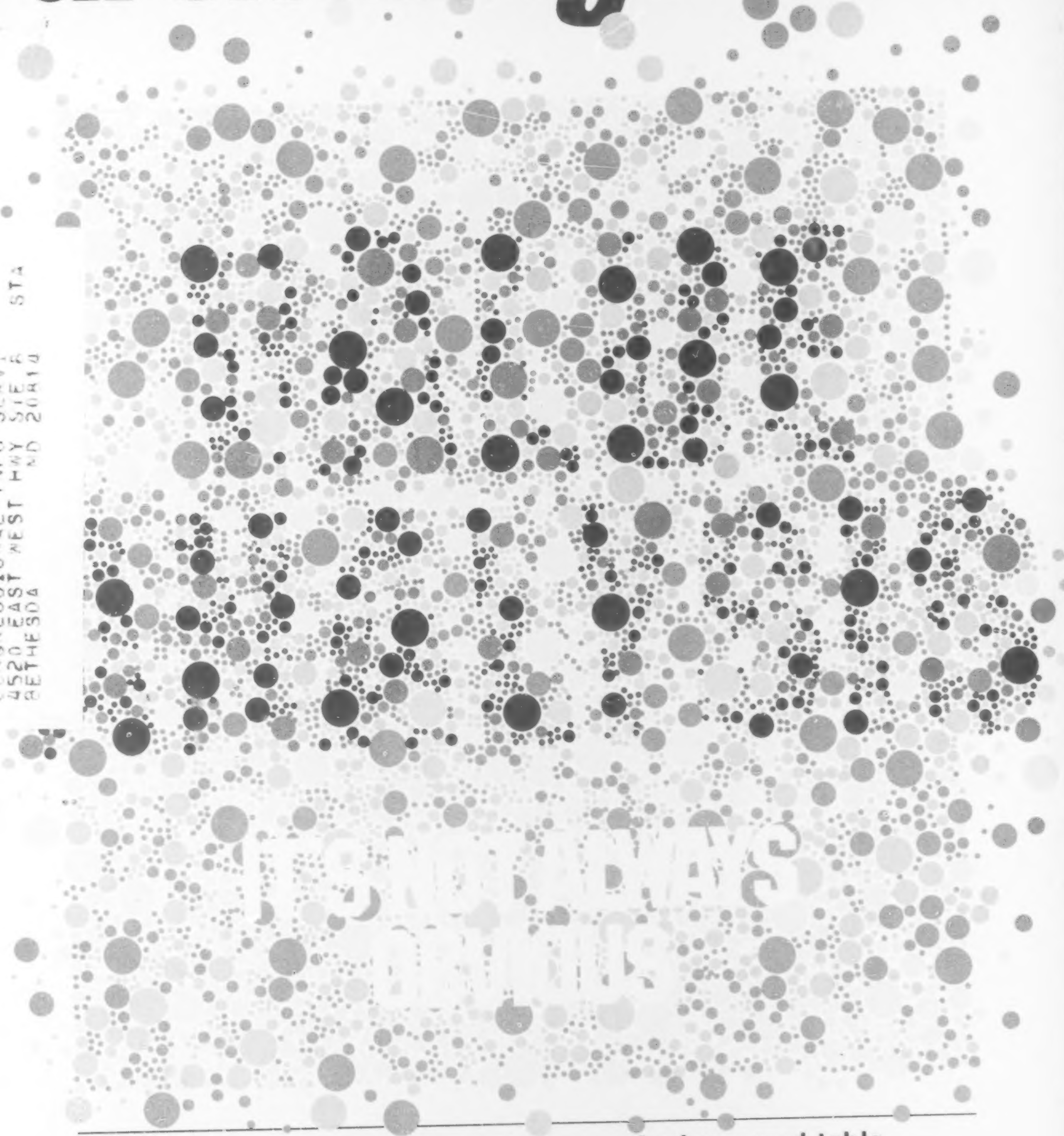

Quality's value exceeds its cost—an exclusive round table

Using purchasing to obtain professional services

Bar code boom extends thru industry

PurchasingWorld® *Helping you manage the business of buying*

February 1988 Vol. 32 No. 2

Special report: Value analysis—

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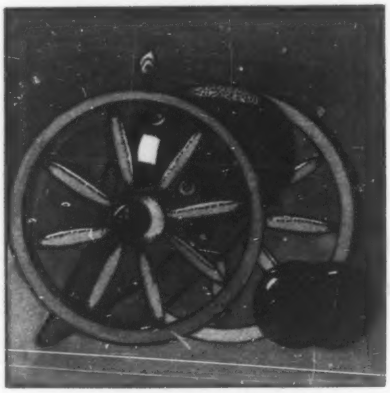
Cover art by Susan Kay Rahn



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PW PREDICTS

Robert S. Reichard, executive editor

Industrial prices increase moderately

Industrial price increases are likely to continue in the moderate range—with little or no additional acceleration anticipated over the next few quarters.

The dollar seems to be stabilizing after its recent declines. To be sure, some additional currency weakness can't be entirely ruled out. But even so, the exchange rate impact on overall inflation for 1988 is not likely to be more than one percentage point—and it could even be a bit less than that.

Energy should be another bright spot on the price front. Crude petroleum quotes are currently struggling to maintain current levels. This not only affects refined oil products such as gasoline, heating oil, and residual fuel—but also chemicals, plastics,and a many other big-user industries.

Data Resources Inc. (DRI) provides an interesting computer rundown on oil's impact on inflation. One of the consulting firm's key findings on this score: If oil settles in the $13-15/barrel range (versus $18/barrel recently), U.S. inflation would fall a full percentage point from DRI's baseline 4.3% rate to near 3.3%.

Another positive factor for the new year: Basic raw material prices are not likely to advance anywhere near as fast as they did in 1987. In fact, another big econometric forecasting outfit—Wharton—sees prices of these key industrial inputs remaining more or less flat—not only for the next few quarters, but probably into 1989 as well. This certainly seems likely in the critical metals area which saw some really big runups in 1987.

The wage cost factor shouldn't be too much of a problem this year, either. Thanks to still-increasing productivity, unit labor costs are expected to rise by only 3-3.5% this year.

Even the supply-demand side of the price equation doesn't look all that bad. True, the typical American factory is now operating at near 82% of its potential—up about three percentage points from the 79% reading of 1986.

Latest projections, for example, show industrial production increasing at about a 3% rate this year. Superimpose this on an expected 2% advance in new production capacity—and it suggests that operating rates won't rise much above 83%.

Also helping the supply side of the equation: A continuing strong import flow—even in the face of the recent dollar softness. A new *PW* survey suggests that about one out of every three respondents intend to increase their take of foreign products this year—offsetting the 50% who expect cutbacks.

What does it all add up to? One recent survey of 42 top economists points to about a 4% increase in the GNP price deflater—an all-embracing yardstick which includes industrial prices, consumer prices, and all kinds of services.

Nor is there any danger of "importing" inflation from our trading partners. A new Organization for Economic Cooperation and Development (OECD) forecast, for example, puts the Japanese and West German 1988 GNP inflation rates at only 1% and 1.75%, respectively.

Plastic Resins

CURRENT SITUATION: It's been a rough year for buyers of these versatile synthetics due to snug supplies and big price boosts in most commodity resins. If there is any doubt on the latter score, look at these impressive price gains *vis a vis* 1987: LDPE (37%), HDPE (22%), polypropylene (32%), polystyrene (54%), and PVC (31%).

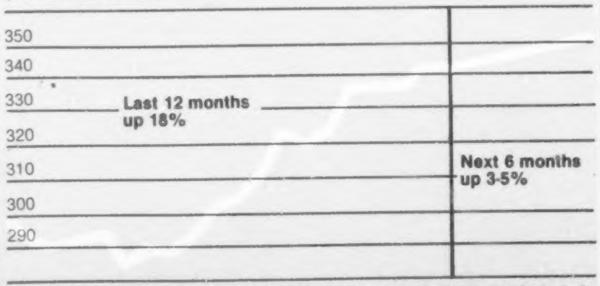
DEMAND: More gains are ahead for 1988. The overall advance is running at twice the pace of general GNP growth. If current economic projections hold up, nearly 60 billion lb of resin could clear the market. But gains will be uneven: LDPE (3%), HDPE (6%), PP (7%), PS (5%), PVC (2%), and ABS (4%). **As in 1987, packaging end-uses should lead the advance.**

SUPPLY: Snugness should persist through much of 1988 in the big commodity resin sector as demand continues to bump up against capacity restraints. Right now, capacity additions will just about keep up with demand—keeping the overall operating rate near 93%. **But relief is on the way for the longer pull.** Supply increases over the next few years: PE (up 16%), PP (up 8%), and PVC (up 16%).

PRICE OUTLOOK: Conflicting forces will buffet the industry. Continued high operating rates will cause upward demand-pull pressure. But cost-push pressures should diminish as petrochemical feedstocks ease in line with softening crude oil tags.

Plastic resin prices

(Index: 1967 = 100)



Handtools headed up

Purchases of handtools—aided by improving industrial demand—are heading for a modest pickup. A new study by the Freedonia Group of Cleveland puts real average gains near 1.5% annually over the next few years—not great, but a lot better than the 2% average real decline of the past decade.

Prices shouldn't be too much of a problem, either. The forecast here: up 2.8% a year—less than half the 6.2% average advance noted over the 1977-86 period.

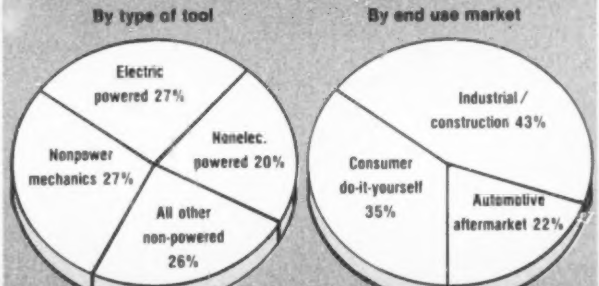
Behind the buying turnaround—aside from improving industrial demand—are 1) a strong do-it-yourself market, 2) opportunities provided by extended vehicle warranty programs, and 3) an improving international trade balance, with net imports dropping nearly 20% by 1991.

Sales of electric powered tools will show the biggest current dollar gains—as advances reach 6.3% a year. One of the prime movers here: The growing popularity of cordless tools. Presently accounting for less than 5% of the power handtool market, the convenience and flexibility advantages of cordless types will be augmented by improvements in technology.

Non-electric power handtools (including pneumatic, hydraulic, power-actuated, and engine-driven types) will grow at a somewhat smaller 4.1% rate in current dollar terms.

But these gains will still be above the estimated 3.4% annual current dollar advances seen for non-power handtools. One reason: U.S. producers have virtually abandoned the low end of this market to offshore producers. Moreover, they face stiff competition from increasingly capable and cost-efficient power handtools.

The new study also breaks down markets by end use. The industrial-construction segment will continue to dominate. But on a growth basis, consumer do-it-yourself demand will set the pace added by the growing secular trend toward self-performance of many home repair and maintenance activities.



Hand tool market trends

By type of tool

By end use market

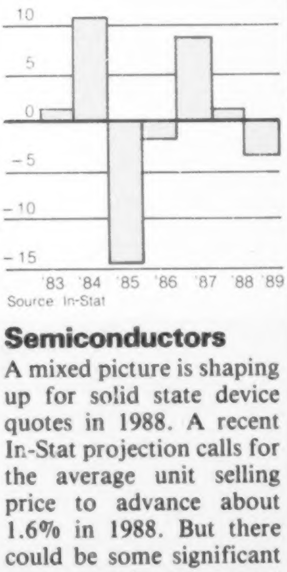
Source: The Freedonia Group (1991 Estimates)

Steel

Tags continue to rise—with the latest move affecting sheet products which are scheduled to move up $30/ton in early April (a 4-8% boost). Several stainless items are also advancing. Ditto, pipe and tube products. Also worth noting: Major mills say they want a 10-20% price increase for their long-term contract customers. Behind all this bearishness: New forecasts which now expect 1988 steel consumption to come close to last year's 87-million-ton total. Imports are also expected to remain relatively low—at 21-22% of total supply (down from the peak 26.4% share hit in 1984).

Semiconductor Prices

Percent changes



Source: In-Stat

Semiconductors

A mixed picture is shaping up for solid state device quotes in 1988. A recent In-Stat projection calls for the average unit selling price to advance about 1.6% in 1988. But there could be some significant component-by-component differences—as follows: MOS logics (-0.7%), MOS memories (8.5%), linear integrated circuits (1.6%), bipolar memories (0.2%), bipolar logics (1.4%), and total discrete devices (1.3%). Preliminary estimates for 1989 by the Scottsdale, AZ consulting firm suggest an overall solid state device price decline of about 3.2%.

Copper

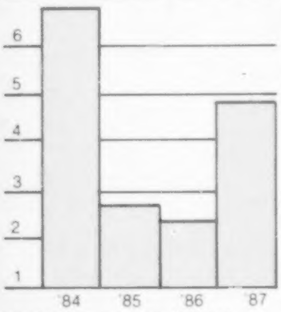
The red metal took a breather last month after the huge upward spiral of the past few quarters. But prices still remain at sky-high levels and could even edge up a bit near-term, as supply/demand fundamentals suggest continued bullishness. Global shortfalls are still put at around 20,000 metric tons/month. Prices will eventually have to fall as new production begins to hit the market later on in the year. More to the point: Quotes could drop to the 90¢/lb level by late summer or fall—a level which would still leave the industry with sizable operating profits.

Aluminum

Look for a modest 1.5-2% increase in 1988 shipments—not bad considering this comes on top of 1987's 5% gain. But the slower growth, plus increasing production, does seem to suggest an end to the runup which has seen ingot climb to near 90¢/lb (a hefty 25¢/lb above early 1987 levels). On the other hand, with supply/demand expected to remain in balance, there is little to indicate any major downward correction. Also pointing to continuing high prices: Low global inventories which at latest report were put at about 3 million metric tons.

Paper & Product Prices

(Percent increase at annual rate)



Source: Bureau of Labor Statistics

Paper

Price increases continue as the order of the day. Boosts of 5% have just been posted on uncoated white papers—coinciding with another rather large $15/ton increase in market pulp. Also heading up are coated groundwoods—as a new $50/ton boost brings tags on the lightweight grade up to $810/ton. And to add to buyer problems, still another move would boost unbleached kraft linerboard by some $30/ton. Behind these upward movements: High industry operating rates—plus the expectation that paper demand this year will increase some 4.5%, on top of 1987's better than 5.5% advance.

Lead

The recent sharp price drop into the upper 30s range doesn't come as any great surprise. Reason: With battery demand falling off seasonally and foreign competition so aggressive, a reduction was essential for domestic producers to maintain market share. The new cut should also lower primary producer discounts which recent hit 4-5¢/lb. Nor is that the end of the line. Expanded primary and secondary output will soon be hitting the market—making a further price dip to near 35¢/lb a good bet by late spring.

Freight

The new year has brought some rate increases. Several trucking bureaus have asked for boosts that run in the 5.5-7% range. But when the dust settles, the final increases are likely to be only about half that amount—around 3%. Rates on eastbound air cargo traffic to Europe have also been moving up about 10%. The latter closely mirrors increases recently posted by carriers shipping air cargo westbound across the Pacific. Behind these air cargo moves: Higher demand on these routes occasioned by the continuing shaky dollar.

Copiers

Add color models to the growing number of product offerings. Many of the big companies—Kodak, Xerox, Canon, Konica, and others—already have models on the market. But they aren't cheap—quotes range from $35,000-$60,000. A smaller firm says it plans to introduce an $18,000 unit later this year. One problem—aside from price—is relatively slow

Equipment leasing grows

Growth is still the name of the game when it comes to the leasing of business equipment.

If a new government estimate is correct, leasing activity could jump by more than 10% this year—approaching an all-time peak of near $100 billion. More significant, the advance will be more than 1.5 times the expected gain in overall business equipment demand.

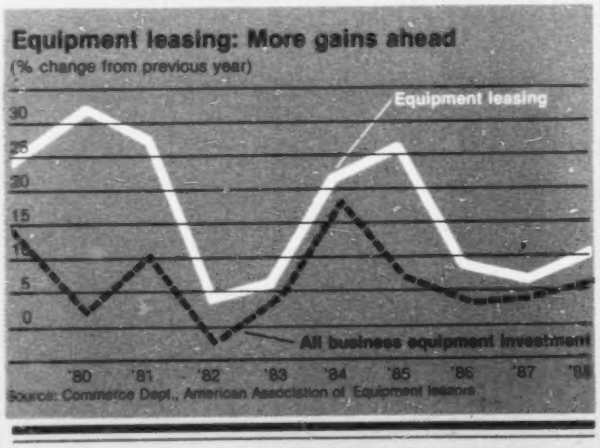
Nor does the near $100 billion 1988 estimate tell the whole story. The estimate is based on a detailed American Association of Equipment Lessors member survey and the AAEL estimates that there may be another 15-20% in new business by non-AAEL members not reflected in the $100 billion figure.

Leading the expected 1988 advance, according to the new Washington report, will be aircraft, scientific and electronic equipment, and telecommunications equipment.

Other key findings of the just-released study:

- **Industry structure:** Consolidation will continue and competition will increase. New firms with specific skills and capabilities will fill niches in markets for high-technology and other specialized equipment. Banks, now able to engage in operating leases, are expected to expand their leased product bases.
- **Foreign competition:** Overseas firms will increase their presence through both direct entry and acquisition. They should be able to compete well on funding costs and will use this advantage to expand into many product areas.
- **Long-term projections:** Active markets should continue to develop and grow around transportation, medical, communications, and high-tech equipment. But with tax reform, tax-oriented leasing will diminish in importance as the loss of tax benefits narrows the pricing advantage of leasing relative to outright purchase.

Nevertheless, a sizable market for tax-oriented leasing will remain as companies subject to the alternate minimum tax find it less costly to lease from companies able to use the tax benefits associated with leased assets.



Equipment leasing: More gains ahead

(% change from previous year)

Source: Commerce Dept., American Association of Equipment lessors

Construction materials

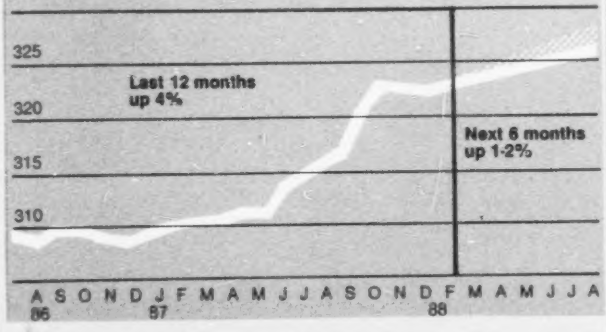
CURRENT SITUATION: Demand has levelled off—reflecting a drop in housing starts at only 1.64 million units (versus 1.82 in 1986). Price average increases have only been on the order of 3% over this period. But there has been considerable product-by-product variation. Copper wire and cable has jumped by more than 25% (reflecting the big jump in basic metal costs)—and structural steel is up 4-5%. But other items such as cement have held steady.

DEMAND: 1988 isn't going to be any world beater—based on housing starts which are expected to drop another 5-10%, and on overall real construction activity which is also expected to decline a bit. Upshot: Many products will find it hard to post gains. **Cement and structural clay could be down about 4%.** And not much change is seen in lumber as lower housing activity offsets continued strength in exports. **On the other hand, domestic construction machinery should benefit from the weaker dollar**—with gains posted in cranes, excavators, compactors, pavers, and compressors.

SUPPLY: Few problems are anticipated as lower demand in most areas is superimposed on steady or marginally higher production potential. One exception is steel where both structurals and rebars are now on allocation with quotas based on last year's purchased amounts. Most steel importers have sold out their self-imposed (or voluntary) quotas for U.S. sales in 1988.

PRICE OUTLOOK: Some increases are unavoidable, but the overall gain should only be about 2% —down about 1% point from 1987. But there could be considerable variation. **Lumber, hurt by housing, will be lucky to maintain current tags.** And plastic construction products, after advancing 7% last year, may be in for a period of consolidation. Cement will just inch ahead.

Construction material prices
(Index 1967 = 100)



speed. Until recently, most color copiers were limited to 3-5 copies/minute. But this is changing. Some of the newest models can run as many as 23 copies/minute.

Zinc

Markets remain quite firm on the basis of Chinese and Russian buying interest—as well as continued production problems at a Canadian refinery. On the demand front, both steel mills and galvanizers have been particularly heavy consumers in recent weeks. Discounts on 1988 contracts are down slightly—from 1.5-2¢/lb last year to only 1-1.5¢/lb now. Relatively low producer price inventories are still another bullish factor. Total free world stocks at latest report were down to 323,000 tons—some 8% under levels prevailing just one year earlier.

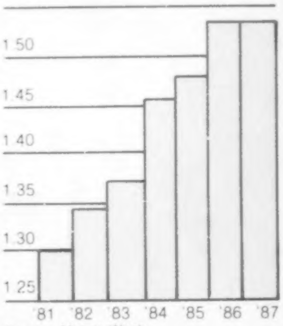
Polyvinyl chloride

Tight supplies (most buyers are now on allocation) have pushed tags up again—another 2¢/lb has been tacked onto the popular plastic, enough to bring quotes on the pipe grade up to near 40¢/lb. Only about a 2% shipment gain is currently being projected for 1988, but with capacity also targeted to move up by only 2%, the industry operating rate is likely to remain in the high 92% range.

Postal services

Look for improved service and volume discounts for Express Mail this spring. New moves planned include 1) discounts based on number of shipments per month, 2)lowering the rate on shipments weighing eight ounces or less (from $10.75 to $8.75), and 3) offering guaranteed delivery by noon the next day for shipments weighing 2 lb or less destined for major markets. Behind the moves: A need to zero in on high-volume corporate shippers.

Magnesium ingot prices
(¢/lb)



Source: Metals Week

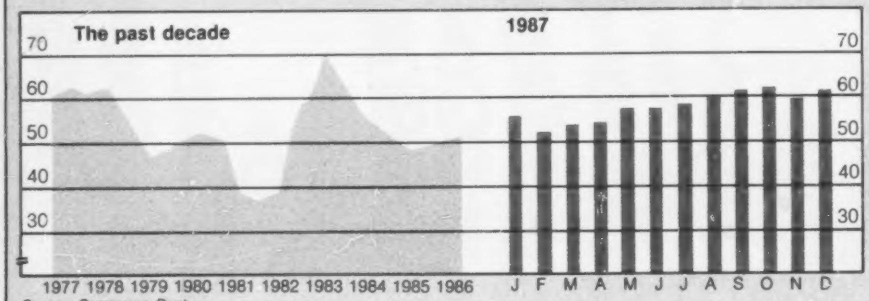
Magnesium

Off-schedule prices are moving up 5¢/lb on primary metal, the desulfuring grade, and various casting alloys. This should bring ingot prices back up to the $1.53/lb list. Other signs of firmness: Producer stocks have been brought down—to the point where some additional production is being brought back on stream. On the other hand, prices will remain unchanged for die casting grades which go to the competitive auto market. Also reassuring is the fact that Norsk Hydro's Becancour, Quebec smelter could be on stream by 1989—and this could will make for another round of oversupply.

BUSINESS DATATRAK

N.A.P.M. business barometer

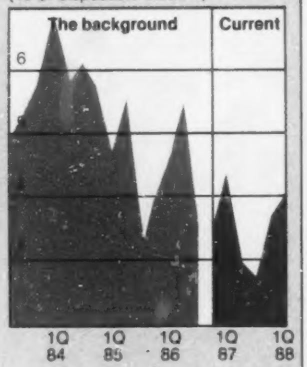
Based on five indicators (employment, inventories, new orders, production, vendor performance)



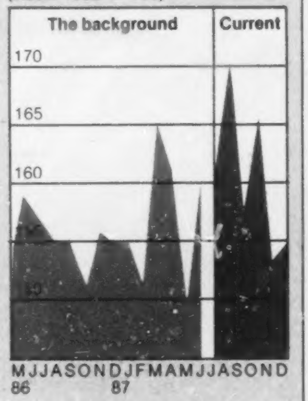
Source: Commerce Dept.

Leading indicators

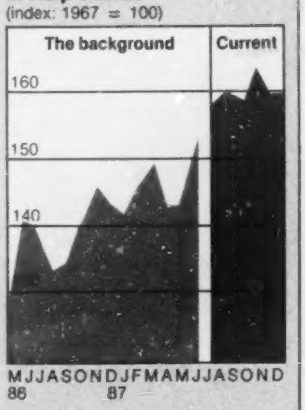
1. Savings ratio
(% of disposable income)



2. Contract awards
(index: 1982 = 100)



3. Help wanted
(index: 1967 = 100)



KEY ECONOMIC TRENDS

Optimism is growing

The new year seems to be getting off to a decent start. Retail sales seem to have leveled off a bit, but exports and capital equipment should rack up some gains—enough to keep GNP in the plus column for at least another few quarters.

In fact, optimism seems to be growing rather than receding. A new survey of 52 economists by Blue Chip Economic Indicators suggests a 2.2% increase in real growth this year—a modest upward revision from the 2.0% projection made one month earlier.

In an early look at 1989, this same group of business analysts is forecasting a continuing slow advance.

But there are more than just economic opinions to back up today's cautious optimism.

Commenting on this, NAPM business survey committee chairman Robert Bretz adds, "virtually all indicators remain positive, with no buildup of inventories. The beginning-of-the-year position of new orders is the strongest in four years, and signals a robust beginning for 1988."

Other economic news, too, suggests that one of the longest post-war recoveries in history still has a way to go.

Auto sales will be down but, judging from 1) the recent holiday buying, 2) consumer attitude surveys, and 3) the nation's savings rate, everything seems to point to only modest consumer retrenchment. On the attitude score, both Conference Board and University of Michigan surveys have turned up again in the latest reported months.

This backs up model-generated forecasts calling for a continued relatively low savings rate (4.0% in the first quarter—see chart) and continued small gains in real consumption expenditures.

Construction may not turn out all that badly. Some declines are expected, but judging from contract awards (commitments for future building, see chart), the fall-off should be manageable.

Some of the loss in capital spending suggested by the above construction members is likely to be offset by higher plant and equipment outlays. Businessmen expect to increase spending in this area by more than 7% this year.

Tending to support this positive plant and equipment forecast is a still-rising factory operating rate. At 82%—the highest level since 1980—it points up the need for new production potential.

Latest unemployment figures also add to the feeling that the next few quarters will turn out moderately bullish.

More important, the demand for new workers is also holding up well. The Conference Board's help-wanted index—160 at latest report—remains close to recent peak levels (see chart).

Also on the plus side is the continuing low level of factory inventories. At the end of 1987, the stock/sales ratio was only 1.60—just above the 1.59 all-time low of previous months.

Who spends how much for R&D?

American industry—with a big assist from Uncle Sam—isn't about to take a back seat to anyone when it comes to research and development.

A new Battelle survey indicates that a hefty $131.5 billion will be earmarked for R&D this year—about 7% more than was spent in 1987. Prices for R&D activities are expected to rise 4.5%, But that would still seem to suggest a 2.5% increase in real or physical terms.

Battelle President and Chief Executive Dr. Douglas E. Olesen notes, "We see private industry continuing its strong support for R&D work. While the rate of increase may be slowing as a result of economic uncertainties, industry will continue to seek innovative technologies for future growth."

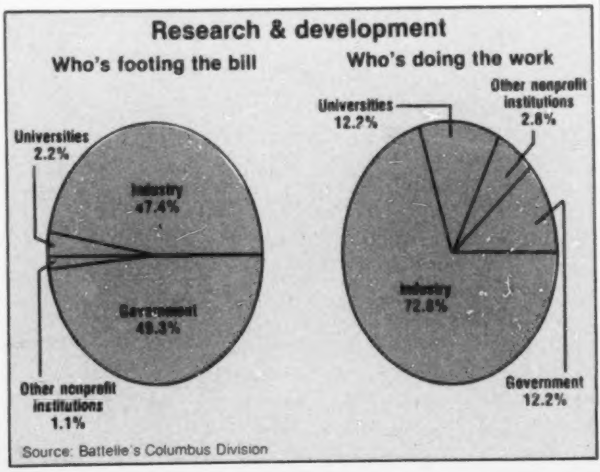
Industry's contribution is highlighted by the fact that some 47.4% of total R&D spending will be privately funded this year. That's not much less than the government's 47.3% contribution (see chart). The remainder of the money will come from universities and non-profit institutions.

But wherever the money comes from, industry will remain the dominant performer. The big Columbus, OH-based research firm projects that industry will do about $96 billion (73%) of the work. This compares to the 12% to be performed by the government and the 15% by academic institutions and other non-profit organizations.

New industry-by-industry estimates suggest that aerospace firms will be doing the most R&D—about 25% of the total—though most of the funding in this area will be coming from Uncle Sam. The electrical machinery and communications industry will come in second—with about a $20.4 billion R&D total. And here again, 40% will be government funded.

Other industrial sectors that are targeted to perform more than $1 billion in R&D include:

- Chemicals—$9.4 billion, 97% to be industrially funded;
- Machinery—$11.9 billion, 87.5% to be industrially funded;
- Autos, trucks and parts, and other transportation equipment—$9.2 billion, 77% to be industrially funded;
- Professional and scientific instruments—$6.8 billion, 84.8% to be industrially funded;
- Rubber products (including all other research performed by major rubber companies)—$1.5 billion, 84% to be industrially funded; and
- Food and beverage products—$1.07 billion, practically all of which is industrially funded.



Source: Battelle's Columbus Division

1988 transportation forecast

Figure on generally small and rather spotty gains in freight tonnages this year—not nearly enough to alter the continuing buyers' market in transportation services.

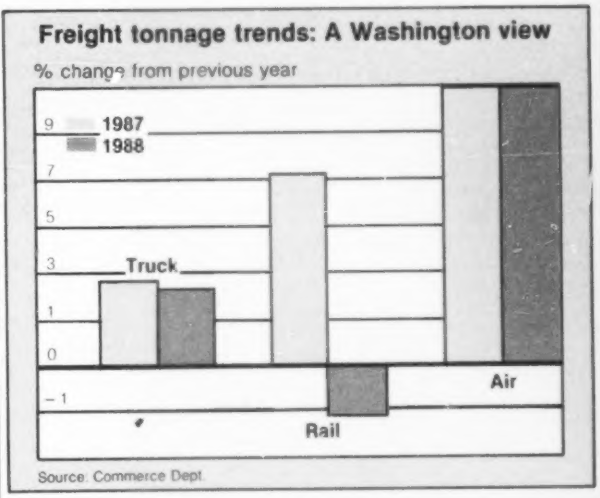
A new DRI study sees LTL trucking going up only 3.6%, about half the 6.3% advance estimated for 1987.

In the meantime, the Lexington, MA-based consulting firm expects the rail sector to post an even smaller 1.9% increase in traffic over the current year.

Uncle Sam's forecasters are equally cautious when predicting gains—with intercity truck ton miles (LTL and TL combined) expected to rise by only 2.3%.

The same study also predicts an even smaller 1.9% increase in trucking revenue—with discounting as the culprit. Government analysts feel marginal fleets will have trouble finding capital and many will go out of business.

On the rail front, these same government people are much more bearish than their DRI counterparts. They forecast a 1.1% drop in ton miles



Source: Commerce Dept.

BUSINESS DATATRAK

this year—a major change from last year's estimated 7.1% tonnage gain.

About the only big demand gains, according to these Washington analysts, will be in the air cargo area. The forecast here: A solid 11% gain for 1988—pretty much a repeat of 1987's performance.

Another plus: Air cargo operations will not be affected by possible limitations of the air infrastructure. Air cargo carriers traditionally operate during "off-peak" hours, late at night when demand on the air traffic control system decreases.

Uncle Sam's analysts also predict an increase in multi-modal transportation companies—sparked by more acquisitions and more mergers between railroads and trucking companies.

This month's breakdown

	Latest level (December)	% change from: Month ago	Year ago
Bearings	359.0	0.1	0.8
Bolts, nuts, etc.	291.1	4.3	4.8
Chemicals, inorganic	297.8	1.0	1.6
Chemicals, organic	365.1	0.4	11.7
Concrete products	325.9	−0.2	0.3
Corrugated cartons	NA	NA	NA
Cutting tools, small	294.0	0.1	0.0
Electric lamps (bulbs)	349.5	−0.8	0.5
Electronic components	204.2	0.4	0.5
Fans and blowers	376.3	1.3	1.9
Foundry and forge products	368.5	0.1	1.5
Fuel oil (residual)	587.4	−5.9	27.1
Furniture, commercial	331.2	0.5	3.2
Gasoline	381.3	−6.2	20.6
Glass, flat	242.4	0.7	3.8
Glass containers	399.9	−0.3	0.0
Gypsum products	310.6	1.6	−10.6
Hand tools	402.6	1.1	4.0
Hand tools, power driven	242.8	0.1	0.9
Industrial furnaces	406.3	0.7	2.2
Integrating and measuring instruments	242.0	−0.2	1.7
Internal combustion engines	360.0	0.0	1.8
Lubricating oil	343.2	−2.0	−0.9
Lumber millwork	333.7	−0.1	4.6
Material handling equipment	302.7	−0.7	1.7
Metal containers	355.0	−1.4	−2.1
Metal mill shapes (nonferrous)	358.0	3.7	20.8
Metal tanks	307.8	0.4	3.0
Motors and generators	364.3	0.7	3.1
Motor trucks	322.4	−2.5	−0.5
Office and store equipment	159.8	0.2	2.8
Paperboard	312.8	0.5	11.4
Paper boxes and shipping containers	297.2	0.1	8.4
Paper office supplies	246.1	0.2	2.1
Paint	285.7	−1.8	1.3
Plastic resins	278.3	0.2	3.4
Precision measuring tools	278.3	0.2	3.4
Pumps and compressors	367.6	0.2	1.0
Refractories	376.9	0.6	1.9
Rubber belts and belting	329.4	−0.2	−2.3
Scales and balances	235.6	−0.1	1.2
Steel products	370.5	1.0	6.4
Switchgear	290.2	−0.3	1.8
Textiles, synthetic fibers	151.2	0.3	1.9
Textiles, gray fabrics	161.4	0.3	7.7
Tires and tubes	235.1	1.0	1.9
Transformers and power regulators	243.2	1.1	3.1
Welding equipment	307.6	0.0	1.8
Wire and cable	249.4	9.3	21.7

CURRENT PRICES

Energy drops lead good news

Good news on the industrial price front as averages over the latest month hold unchanged—a lot better than last year's gradual rise.

Best showing continues to come from the energy sector where quotes over the latest 30-day period dropped a significant 2%. And the decline was pretty widespread—embracing lube oils, home heating oil, diesel, jet and residual fuels, gasoline, liquid petroleum gas, and crude oil. Only natural gas and electricity managed to buck the downward trend.

Packaging was more of a mixed bag; while paper boxes and shipping containers continued to edge higher, aluminum beverage cans and glass containers both dipped a bit.

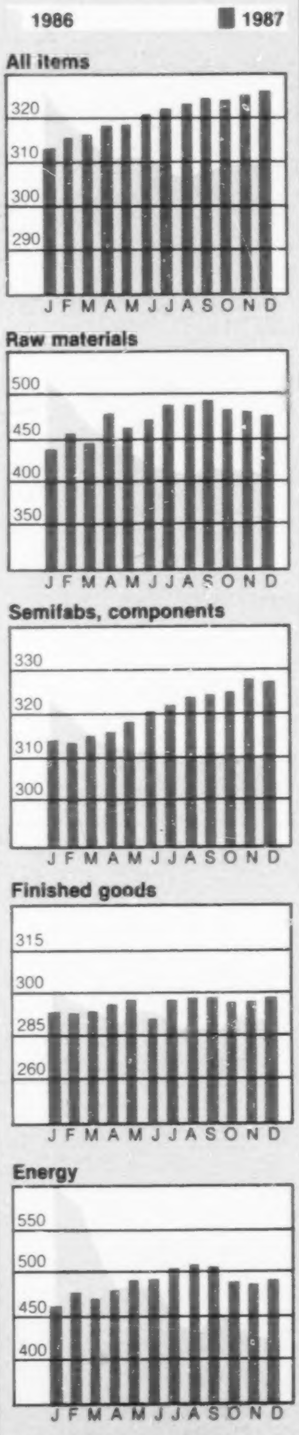
The chemical and allied product industry also remained on the neutral side. While industrial chemicals, synthetic rubber and synthetic textiles were up, plastic resins and paint both tended to move lower.

Capital equipment managed to move to slightly higher ground, sporting a 0.2% increase over the month. Behind the boost: Higher asking prices for heavy trucks, oil and gas field equipment, metal-cutting machine tools, material handling equipment, and mining machinery.

Metals, too, were generally higher. The biggest boost came in copper,

Industrial prices

(Index: 1967 = 100)

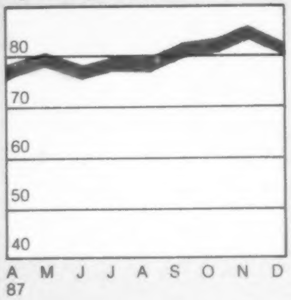


Source: Bureau of Labor Statistics

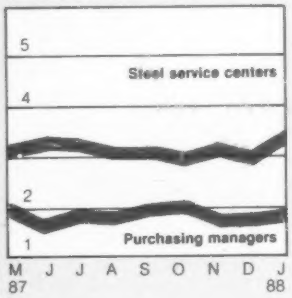
BUSINESS DATATRAK

Steel

Operating rates

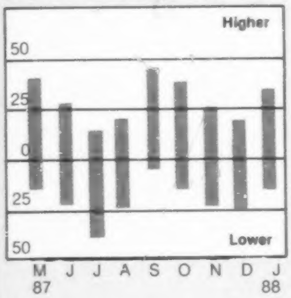


Inventories
(Months supply on hand)

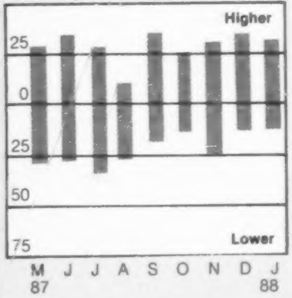


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer



where shortages sent tags through the roof. Also heading higher over the month were aluminum, steel mill products, zinc, precious metals, nonferrous metal ores, and copper and aluminum scrap.

There were also scattered increases in some other product lines—including nonferrous wire and cable, fabricated metal products, metal fasteners, commercial furniture, flat glass, and tires. These were more than enough to offset declines in softwood lumber, plywood, instruments, switchgear, and rubber belts and belting.

So much for history; what about the next few months? One government analyst feels the overall upward drift in the bellwether industrial producer price index is about to resume. Why? Because of a diminished downward pull from energy, and seasonal influences (many firms use the first quarter of the year to post annual increases). His near-term forecast: Small monthly increases, averaging out in the 0.3-0.% range.

Import prices
(Compared to domestic)

Steel buyers

ABOVE 50%
SAME 38%
SLIGHTLY BELOW 12%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 16%
SAME 80%
5-10% BELOW 4%
10-20% BELOW 0%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

STEEL SCENE

Buyers see surge continuing

The steel buying surge of the past year is still going strong. Both buyers and service centers agree on this. Surveys from both groups suggest more gains in the months ahead.

Some purchasing managers responding to the latest NAPM steel survey now see increased receipts of the metal into their plants over the next three months.

Distributors responding to a Steel Service Center Institute (SSCI) survey tell much the same story. The numbers here are almost identical to those of buyers: Some 36% expect increases in sales to users and 14% figure on some decline.

Andrew Sharkey, SSCI president, adds that stainless steel bar and alloy continue to register impressive gains—with his only negative note alluding to some slippage in plate, tubing, and structurals.

Sharkey also cites some service center inventory buildup. While he feels some of this may be seasonal, another part could be related to stocking up in anticipation of price increases.

But whatever the reason, distributors don't seem to be concerned about the buildup. More to the point, the 16% who currently rate their stocks as being too high are offset by another 16% who now feel they're too low.

Steel buyers, on the other hand, are still cutting stocks. Their holdings are now around the 1.82 months level, significantly under the 2.07 high of this past spring.

This dropoff may be due in part to increasing emphasis on just-in-time stocking techniques. But another part could be due to the inability to snap up more than just bare minimum needs.

But whether they will be able to do so in the near term remains questionable. Reason: Possibility of shortages. Biggest worries are centered in hot- and cold-rolled sheet and plate. Coated sheet and structurals are also still on some PMs questionable list.

Some of this concern could be unwarranted, for 1988 forecasts suggest that domestic shipments will stay at last year's levels. Then, too, the supply side of the equation should be improved as 1) the new year is unhampered by post-strike mill startups, and 2) capacity remains relatively stable compared to last year's big cutbacks.

The worry about prices expressed by many buyers and service centers seems more realistic—a series of increases has just been announced—and all signs indicate that most or all of them will hold up.

That's not only because of closer supply/demand balance but also because of the lack of import competition. The latter shows up most clearly in buyer response to an import/domestic price comparison question. Half say foreign tags are now higher and only 12% say they're lower. (The remaining 38% see no significant difference.)

The price comparison figures are even more impressive on the service center level, where only 4% note a foreign price advantage in carbon products—and even then the break is 10% or less. True, 15% say imported stainless offers some advantages. But even here that's a far cry from the 75% reading noted just one year earlier.

The lack of foreign price competition and improved domestic mill operating rates are prompting some of these service centers to budget for significant increases when replacing their current stocks. All in all, an overwhelming 96% expect to pay more for their steel six months from now.

Even that doesn't tell the whole story. More than one out of four of these distributors (28%) see the increases running in the over-5% range.

PROCUREMENT STATUS

Scattered worries on buying front

1988 seems to be starting where 1987 left off—most industrial buyers are still concerned about availability and leadtimes.

No one is pushing the panic button, though. The latest buyers' reports actually show more PMs cutting inventories than adding to them.

While few are complacent, most purchasing executives believe that things will actually improve this year. Their confidence is based on the relative slow growth predicted for the year ahead, the continued availability of imported goods, and new supplier plans for capital expansion.

The latter is most reassuring. But new capacity doesn't appear overnight and that's why ***PW's*** exclusive leadtime index has come in above the neutral 50 mark for the ninth time in 11 months.

Two findings by the NAPM Business Survey Committee also indicate some problems. Only 14% of queried buyers now say they are buying hand-to-mouth—down from the 18% figure of the previous two months. Conversely, the 26% buying six months or more in advance is the highest years.

The group also reports a continuing drift toward slower deliveries. At latest report, some 30% of respondents noted some slowdown over the past month—10 times the 3% who were lucky enough to experience a speedup. More important, the trend toward slower performance has been going on for 15 consecutive months.

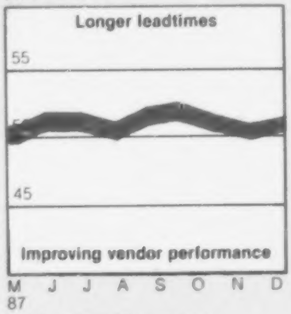
One reason for this poor performance is the growing list of items on the short-supply list. Procurement problems are now reported for aluminum (particularly ingot), copper, steel, hot- and cold-rolled steel sheet, wood pulp, caustic goods, acetic acid, ethylene, polyethylene, plastic resins, methanol, and titanium dioxide.

When should things begin to ease up? It's hard to pinpoint a specific date, but the consensus is that the overall supply situation should begin to improve by late summer or early fall. It may be next year before the short-supply list is empty.

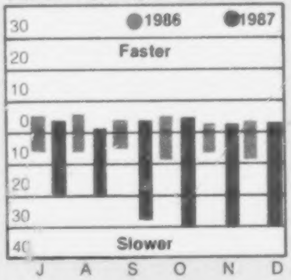
Monthly procurement status report

Leadtime index

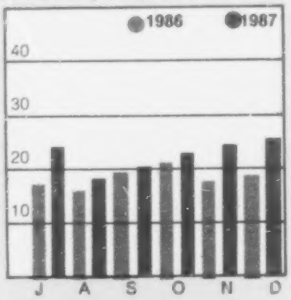
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



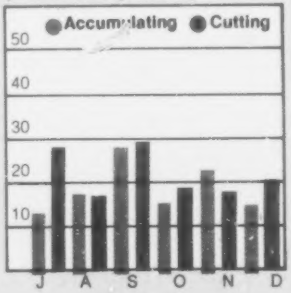
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

Leadtimes and availability

Chicago: Bearings leads have gone out to 20 weeks. Also out are polyethylene (to 8-10), Mylar (to 10-12), and structural steel (to 6-10). Hot rolled plate is tight, and most steel remains on allocation.

Cleveland: Status quo, with these weekly leads: Maintenance paint (2), polyethylene (2-3), PVC resins (3), cold-finish aluminum (8), glassines and greaseproof papers (4-5), and hardwood lumber (2-3).

Houston: Turbines are now at 14 months and high-voltage electric motors at 8-10 mo. Other current waits: 15-600 psi cast steel valves (0-4 mo.), and structural steel (2-4 mo.).

Los Angeles: Several items have moved out in weeks: Aluminum tubing (5-6), grey iron castings (6-8), specialty wire (5-7), pumps (12-14), and imported fasteners (22-24). But domestic fasteners are at (4-6 wk.).

Philadelphia: A few stretchouts in some component parts bring weekly leads to: Standard bearings (6-8), special bearings (20), aluminum die investment castings (10-14).

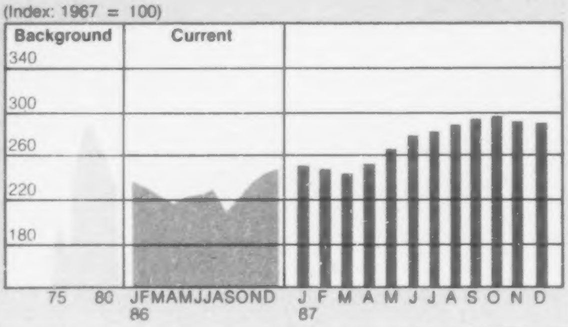
Pittsburgh: Only one change here, as zinc drops from 4 to 3 weeks. Other delays: Steel strapping (2-3), maintenance paint and PVC resins (5), nickel (2), silicon (3), corrugated boxes (3-4), drums (1), plastic packaging materials (2-3), and waterproof papers (8).

BUSINESS DATATRAK

Raw material price barometer

Latest month 291.7
Month before 292.0
Year ago 247.5

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	23.95
Steel, bars, Pitts., cwt.	16.50	16.50	23.95
Steel, bars, C.R., Pitts., cwt	19.45	19.45	31.00
Steel, plates, Pitts., cwt	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	28.15	28.15	25.90
Steel, strip, C.R., Chi., cwt	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.890	.810	.535
Antimony, N.Y., dealer, lb	1.12	1.10	1.05
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	2.04	1.84	1.29
Brass, yellow, [sheet], lb	1.99	1.79	1.24
Cadmium, N.Y., dealer, lb.	3.00	3.00	0.97
Copper, electrolytic, wire bars, refd., lb	1.40	1.20	.65
Copper sheet, over 24 in., lb.	2.13	1.93	1.38
Lead, common, N.Y., lb.	.380	.420	.280
Magnesium, pig ingot, [99.8%], lb	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	345.00	325.00	220.00
Molybdenum, oxide, dealer, lb.	3.03	2.80	3.07
Nickel, cathode, dealer, lb.	3.80	3.03	1.70
Platinum, dealer, oz.	500.00	510.00	534.00
Silver, N.Y., oz.	6.81	6.92	5.57
Tin, N.Y., dealer, lb.	3.20	3.18	3.13
Zinc, Prime West, East St. Louis, lb.	.45	.45	.41
Zinc, die casting alloy, No. 3, lb.	.505	.505	.525
PAPER			
Uncoated book #3 offset, ton	890.00	890.00	860.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	17.07	17.14	16.38
Grocery sacks, ton	435.00	410.00	390.00
Solid bleached paperboard, ton	650.00	650.00	550.00
Kraft linerboard, 42 lb., unbleached, ton	380.00	380.00	320.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.274	.274	.243
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.24	1.24	1.06
Cotton middling, 1", N.Y., lb.	.600	.596	.545
Printcloth, 48", 80x80, N.Y., spot. yd.	0.92	0.92	0.90
Army duck, 37", 13 oz., yd.	1.51	1.51	1.40
Blended printcloth, 64", 78x54, yd.	.80	.80	.80
20s combed yarns	2.00	1.74	1.74
Wool 64s, Staple, lb.	3.00	3.00	1.90

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	75.00	75.00	80.00
Benzene, petroleum, tanks, Houston, gal.	0.85	0.89	1.15
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.78	.78	.91
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.44	.36	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.32	.32	.27
Polyethylene resin, low density liner film grade (market place), lb.	.385	.385	.290
Polypropylene, homopolymer grade (market price), lb.	.470	.470	.325
Polystyrene, general purpose grade (market price), lb.	.550	.535	.360
Polyvinyl chloride, pipe grade (market price), lb.	.380	.380	.295
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.42	.40	.25
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	152.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.80	.80	.77
Xylene tanks, gal.	.745	.780	.765
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	320.35	333.75	326.75
Lumber 2x2 pine, mbf, cl	322.10	326.35	318.65
Plywood, plyform, ¾", msf, cl	569.85	568.05	584.10
Plywood, ⅝", msf, cl	395.45	394.90	382.60
Cement, bulk, ton, tl	63.73	63.73	63.63
Sand, ton, cl	7.31	7.12	6.62
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	47.42	48.83	48.27
Crushed stone, 1½", ton, cl	8.26	8.31	7.83
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.91	0.91	0.84
Gypsum sheathing, ½"x1"x8", msf, tl	225.54	225.54	213.87
Brick, common, per thousand, tl	200.91	200.91	186.42
Asphalt paving, AC-20	139.37	140.30	124.19
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.57	7.54	7.36
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	11.50	14.75	11.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	19.50	19.75	17.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.540	.560	.375
Gasoline, 94 oct., reg., Chi., tank car, gal.	.495	.540	.428
Heating oil, No. 2, Chi., bulk, gal.	.550	.585	.430
Heating oil, No. 2, N.Y., bulk, gal.	.563	.568	.438
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.528	.553	.433
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.260	.260	.240
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	102.00	106.00	80.00
Steel, No. 1 hvy., dlvd., Chi., ton	100.00	105.00	77.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	1.130	1.015	.560
Copper, No. 2, East, wholesale buy, dlvd., lb.	1.035	.925	.480
Brass, red, East, wholesale buy, dlvd., lb.	1.090	.975	.520
Brass, yellow, East, wholesale buy, dlvd., lb.	.425	.405	.330
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.550	.510	.340
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.645	.585	.365
Zinc, old, East, wholesale buy, dlvd., lb.	.20	.20	.20
Lead, clean solids, East, wholesale buy, dlvd., lb.	.240	.265	.155
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	25.00	25.00
Paper, old corrug. box, dlr., N.Y., ton	10.00	15.00	20.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.120	.120	.095
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.23	.23	.11

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Survey of the month

Imports will decline slightly say *PW* readers

Imports, despite the softer dollar, will continue to play a major role in near-term industrial purchasing strategies.

This may be one reason the pesky U.S. trade deficit continues near record levels. In any case, a new nationwide *PurchasingWorld* survey suggests that any 1988 import decline is likely to be quite small—maybe even non-existent.

Comments by responding PMs indicate several factors behind the continuing influx of foreign materials and products:

- The widely reported fall in the U.S. dollar has been spotty—limited to just a handful of countries.
- In many cases, overseas vendors have become the only viable source of supply.
- These same foreign suppliers often offer better-than-domestic quality and servicing.
- Foreign producers continue to step up their marketing activity.
- Countertrade requirements in some cases call for reciprocal importing.

Looking first at the dollar factor—only 38% of responding purchasing executives dub the weaker dollar as a significant factor in curbing imports—with the remaining PMs split up as follows: Small impact (33%), no real impact (29%).

A look at the actual behavior of the dollar *vis a vis* other currencies helps explain this wide difference of opinion.

More to the point: While the dollar has nosedived against the Japanese yen and German mark, it has scarcely moved when compared to some other currencies.

Thus the U.S. dollar has fallen only slightly against that of Canada, our number one trading partner. And it has barely budged against the currencies of Far Eastern entities such as Hong Kong, Taiwan, and South Korea—all of which are among our top trading partners.

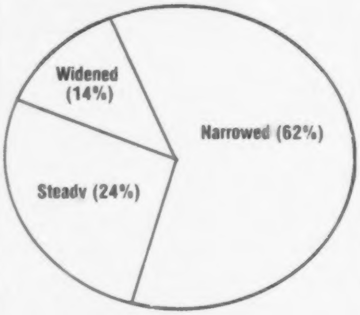
Average dip is slight

To put all this into proper perspective: The overall U.S. dollar is only 6-7% below its level of just two years ago—based on a Manufacturers Hanover Bank index that measures the currencies of all 18 of our biggest trading partners.

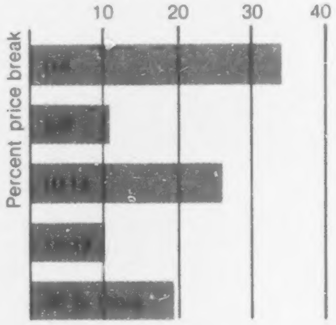
The inescapable conclusion: Not all of our imports have been battered by exchange-related upward price pressures. And this mixed currency picture has actually resulted in some shifts in imports—toward countries with weaker exchange rates.

PM's look at imports

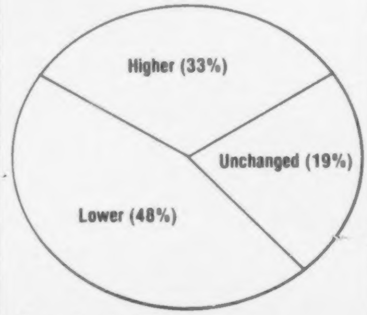
While the price gap has narrowed
(Now v.s. year ago)



Savings are still possible
Percent of respondents



So imports will stay high
(1988 vs 1987)



Source: PurchasingWorld

In any event, nearly one out of four importing buyers report such shifts—generally away from Europe and Japan—and toward other nations, many of which continue to report labor costs well under those noted for the United States.

Then, too, imports of several other product lines are likely to move up the price ladder in the months and quarters ahead. Some of the items expected to sport higher tags: Castings, bearings, forgings, chemicals, heavy electrical equipment, integrated circuit memories, steel wire, and plastic molded items.

Shifts to other countries

Not surprising then, the domestic-import price gap has narrowed a bit. The 62% who now note some shrinkage in price differentials more than outweigh the 24% who note an unchanged gap and the 14% who, by shifting over to imports from weak currency nations, have been able to widen the price advantage.

Importing purchasing managers still report a considerable price advantage on their average import mix. The typical break, for example, still runs in excess of 10%—and more than one out of every four queried buyers say their saving is actually in excess of 15%.

Another finding pointing to a continuing large import role: About half of those who import say that more than 10% of their purchased materials and parts now come from some overseas source.

Demand is a major factor

Price is not the only factor behind such continuing heavy incoming tonnages. Many PMs point to product availability—specifically the lack of alternate U.S. sources.

After purchasing managers add to the list of factors pushing them toward imports—noting 1) better-than-domestic quality, 2) responsiveness to lead-time requirements, 3) technological leadership, and 4) the ability to accomplish quick prototyping.

And overseas sellers are not about to give up the lucrative U.S. market. **PW**

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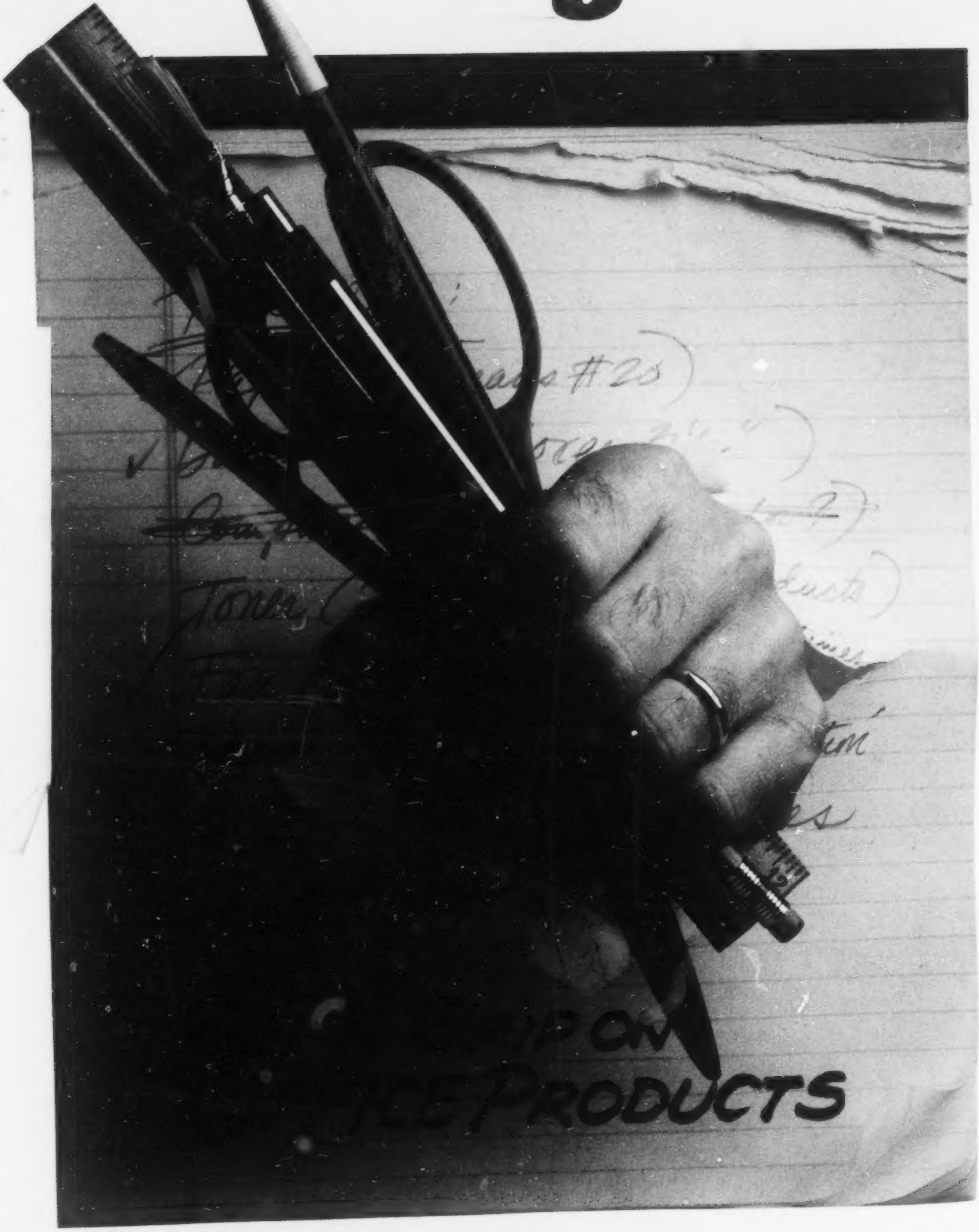


SSCI President Sharkey views 1988

Pinkerton: smart commodity codes

Buyer's guide to remanufactured products

PurchasingWorld®

Helping you manage the business of buying

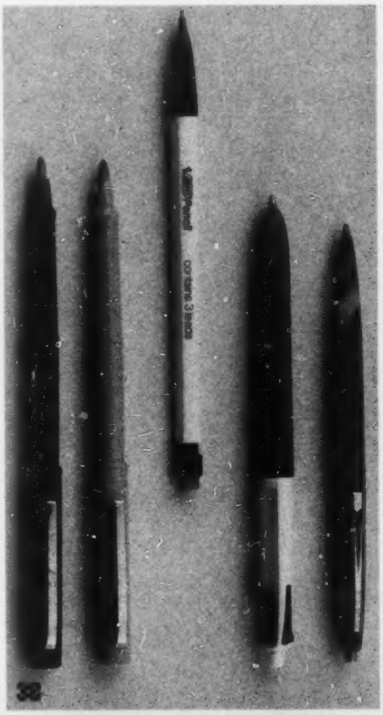
March 1988 Vol 32 No. 3

Cover story

28 Get a grip on office products
The average purchasing professional in charge of procuring office supplies spends more than $400,000 per year. If you think there are possibilities for savings in that number, you're right. And *PurchasingWorld* spells them out in this report.

32 Bulls in business equipment
The Computer and Business Equipment Manufacturers Association (CBEMA) is very bullish on the office equipment market. Their figures in the various product categories pinpoint the reasons for their positive outlook.

38 Choosing the right vendor saves more than money
In office products, as in other areas, the right vendor can make all the difference. Services such as EDI, custom stocking, and prompt shipment are offered by progressive suppliers. How does your office supplies vendor measure up?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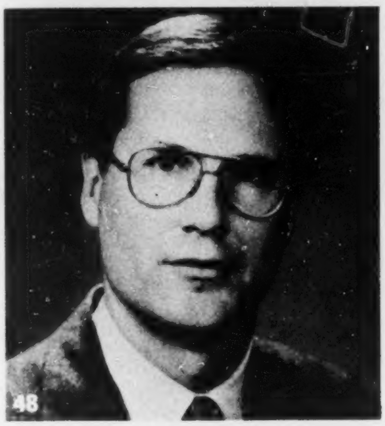
What can transportation buyers look for in the months ahead? *PW's* quarterly report from Wharton Econometrics covers planes, trucks, boats and trains.

48 Service centers plan for customers' success
In an exclusive interview with the Steel Service Center Institute's president, Andrew Sharkey, buyers can find not only how the year looks from SSCI's perspective, but how service centers are changing and planning for the challenges of the future.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PW POINTERS

Fastener testing provided in 48 hours

The quality and integrity of industrial fasteners can be determined quickly through a testing program begun by Herron Testing Laboratories. Responding to concerns about the existence of counterfeit bolts and nuts that may fail in use, Herron will identify suspect fasteners by chemical content and performance criteria within 48 hours after receiving samples. Explains John L. Herron, president, "Unfortunately there's no visible difference between authentic and counterfeit fasteners. Some are deliberately mismarked and sold as higher-strength grades. The naked eye cannot determine improperly heat-treated fastener materials or distinguish zinc plating from the stronger, more resistant cadmium plating."

The Herron program offers two test options: mechanical, metallurgical, and chemical analyses to determine elemental content, ultimate strength and yield properties; and, individual property or element determinations requested by the user. **Circle 1**

'Secret' semiconductor part numbers revealed in latest distributor catalog

Have you ever been stumped trying to decipher a 'special' semiconductor part number for a product that has just failed and has shut down production? Many manufacturers of electronic equipment like to put such 'specials' in their products, hoping to make the replacement sale when the part fails in the field. However, that manufacturer isn't always around or findable when the part fails.

Henry R. (Cappy) Caplan, the guru of replacement power semiconductor products, has taken the mystery out of special semiconductor part numbers in his firm's catalog #1287. The catalog lists thousands of obsolete, special, proprietary and just plain hard-to-find diodes, SCRs, modules and bridges that the firm has identified and sourced.

Caplan's catalog and his firm's expertise in determining which is the right power semiconductor for a specific replacement job can save buyers a tremendous amount of time and can help get production back on line overnight. Aptly, his firm is named MRO Electronic Distributors, Inc., and it's located in Hollywood, FL. **Circle 2**

What to consult to find 12,000 consultants

Who consults on what and where to find them is detailed in the 2,289-page Consultants and Consulting Organizations Directory from Gale Research Co.

Each consultant for firm is listed in one of 14 subject categories, from "Agriculture, forestry, and landscaping," to "Social issues and concerns". The largest sections in the new edition are "Business and finance," "Engineering, science, and technology," and "Marketing and sales." Over 1,100 pages of indexes are provided to facilitate use of the directory which sells for $380 for each two book set. **Circle 3**

How to prevent outsiders tapping into your computer system thru electrical lines

Data from computers, including PCs and other electronic equipment, can easily be retrieved (illegally) from any ordinary electrical power line. To protect sensitive information from being siphoned away through electrical lines International Computer Power, Inc., has available the RotoPlus load/line isolator for commercial, industrial, and defense industry applications.

The RotoPlus prevents data from leaving a computer and coming out a power line. This provides impenetrable security not obtainable through other technologies. Equipment of this type is essential for facilities requiring total protection from industrial espionage, breach of security, and unauthorized access to confidential records and proprietary data.

Prices of the RotoPlus products range from $2,000 to $20,000 depending upon the size of the system. **Circle 4**

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Weak demand-pull and wage-pull factors dampen inflationary pressures

Earlier fears of an imminent uptick in the overall inflation rate are beginning to fade.

One major reason: Demand gains are expected to be rather subdued over the next few quarters as: 1) consumers become a bit more selective in their purchases; and, 2) industry begins to work off some of its finished goods inventories.

The inventory buildup has been limited to the wholesale and retail spheres. Even so, this could have some impact on the producer level as distributors hold back on the placement of new orders.

In any event, there's little to indicate a repeat of the recently concluded fourth quarter when demand (as measured by industrial production) jumped by a fairly substantial 6% (at annual rate). Best bet for the first half of this year—only about a 1-2% annual rate of advance, hardly enough to spark any new demand-pull pressure on prices.

Wage-pull inflation also remains quite weak. Over the past year, for example, nationwide wage and benefit costs rose over 3.6%—the same rate as in 1986. Coupled with continuing productivity gains, this small advance has actually resulted in decelerating unit labor cost increases.

Moreover, zero in on the manufacturing sector and unit labor costs have actually declined—falling to their lowest level in more than six years—thereby lessening the need for wage-cost pass-through.

There are other positive signs too. For one, the steady rise in spot raw materials prices seems to be leveling off. Indeed, *PW*'s sensitive price barometer is actually down about 1% over the past few months.

Still another encouraging trend: The new downdrift in interest rates is helping to reduce inventory carrying charges and other financing costs.

Nor have rising import tags managed to change things all that much. Thus over the past year when import prices (including food and fuel) rose by almost 15% comparable domestic averages advanced by less than 5%. Implication: Domestic producers are acting with restraint in an all-out effort to recapture previously lost market share.

What does it add up to? PW equations now point to only a 3-3.5% annual rate of increase in overall industrial prices over the first half of this year. This would be a bit under the 4%-plus rate of the last six months of 1987.

Another possible consumer price restraint is the recent distributor inventory buildup noted earlier. Other things being equal, this should mean more store-wide sales in the weeks and months immediately ahead as retailers move to lighten shelf loads.

Still another positive cost-of-living sign: ample or more-than-ample food supplies. This condition has prompted the Agriculture Department to predict only a 2% increase in supermarket food prices for this year—less than half last year's 4% advance.

Import prices

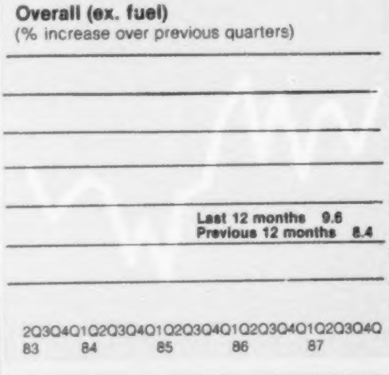
The weak dollar continues to take its toll, driving import prices up 9.6% over the past year—even after eliminating the effects of volatile fuel tags.

Add in the 8.4% non-fuel price advance of the previous 12 months, and the increase over the past two years comes to 18%.

Nor does the rise show any signs of levelling off. The latest Labor Department reading suggests a 3% overall advance over the most recent 3-month period—with individual sectors shaping up along these lines:

- **Crude materials:** A 3.8% fourth quarter rise brought the 12-month boost to 14.4%—despite some decline in lumber tags. Substantial increases over the past three months were registered for metal ores and scrap (10.1%), crude rubber (9.4%), and pulp and wastepaper (5.7%).
- **Chemicals:** Prices jumped 4.9% over the past quarter, bringing the 12-month advance to near 12%. Manufactured fertilizers (up 25.7%) led the upward trend.
- **Intermediate manufactured products:** Quotes rose 3.3% this past quarter—and 13.3% for 1987 as a whole. Some of the latest quarterly increases: iron and steel (5.1%), nonferrous metals (4.5%), textiles (3.4%), and paper and paperboard (1.8%).
- **Machinery and transport equipment:** A rise of 2.4% reversed a fractional third quarter decline. Largest quarterly boosts were in general industrial machinery (5.1%), specialized machinery (5.3%), and metalworking machinery (4.0%).
- **Miscellaneous manufactures:** Prices advanced during the 4Q 1987 as follows: plumbing, heating, and lighting fixtures (4.9%), professional and scientific equipment (4.3%), and photo and optical goods (3.3%).

Import prices: move up again



Product by product (% increase over last 12 months)	
Textiles	9.1
Steel bars, rods, shapes	12.04
Fasteners	11.2
Tools	3.3
Elec. motors & gener.	8.1
Textile mchy.	19.3
Printing mchy.	17.5
Metalworking mchy.	16.7
Heating & cooling eqpt.	14.0
Pumps & compressors	11.8
Mechanical handl. eqpt.	13.3
Bearings	9.8
Office mchy.	6.5
Elec. mchy.	5.2
Autos	4.3
Elec. components	–3.9

Polyolefin market trends

Polyolefin (polyethylene and polypropylene) should remain in relatively tight supply over the next few years.

So say analysts at Quantum Chemical Corporation who figure that announced capacity additions through 1992 will just about keep up with demand. Result: Near 95-100% operating rates (as a percent of effective capacity) for the overall polyolefin sector through this 5-year period.

The report hastens to add that snugness is not the same thing as outright shortfalls. Unlike last year, when polypropylene demand exceeded industry capacity by 4% and high-density polyethylene (HDPE) demand was virtually equal to industry capability, there should be enough to go around.

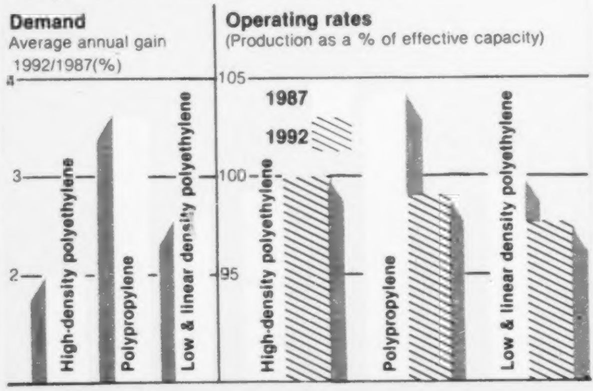
Another reason shortages are not likely: Demand gains will be quite modest—averaging out near 3% a year. That's a sharp deceleration from last year, when inventory buying pushed LD/LLDPE, PP, and HDPE prices up 8.4%, 12.3%, and 16.3%, respectively.

On an end-use basis, film should continue to be the number one growth area—rising at about a 5.5% annual rate (reaching 8.1 billion lb in 1992). Blowmolding grades should also rack up bigger-than-average (4%) rate of growth—reaching about 3.6 billion lb in 1992.

On the other hand, injection molding will come in with about a 2% advance—still enough to bring totals during the latter year up to 4.7 billion lb.

- **Fibers/filaments:** Up 3.5% a year through 1992—largely due to increased demand for PP.
- **Sheet extrusion:** Up just shy of 3% a year—with both HDPE and PP seeing much greater demand.
- **Pipe/conduit:** Up 3% a year—mainly on the strength of increased demand for HDPE.
- **Wire/cable insulation:** Only modest increases are anticipated. But LLDPE will account for 56% of this market by 1992—compared to only a 40% share in 1986.

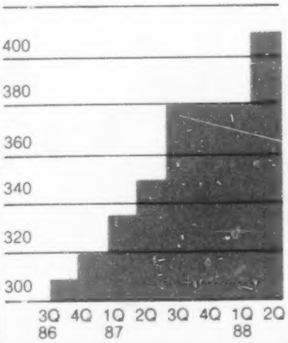
Polyolefin market trends in 1992



Source: Quantum Chemical Corporation

Linerboard prices

($/Ton)



Paper

January increases are holding up in such major areas as newsprint, uncoated white sheet, coated groundwood and free sheet, and market pulp. More hikes are coming as mills move to boost linerboard $30/ton (to $410). This, in turn, could put new upward pressure on corrugated boxes. Groundwood specialties—up 34% since early 1986—are also expected to rise again, probably by 7%. Behind all this bullishness: Continued high operating rates—with coated paper, uncoated free sheet, linerboard, and newsprint all expected to operate in the 90%-plus range this year.

Steel

Price averages continue to move up, with boosts now scheduled for pipe and tube, flat-rolled products and stainless. Almost every major item is up since last summer—with both cold rolled sheet and plate advancing $20/ton over this period—to $485/ton and $415/ton, respectively. But future increases will be more restrained as demand levels off. Consumption could drop slightly in 1988—from near 90 million tons to around 87 million—as declines in auto and construction demand more than offset gains in the capital goods area. Shipments will follow a similar pattern, dropping off fractionally from 1987's estimated 76 million ton level.

Glycerine

Recent sharp price cuts have knocked more than 10¢/lb off the going quote—with current levels put in the mid-60s range. Producers aim: To restore order to what has heretofore been a sharply discounted market. The new reductions should also discourage imports—another contributor to the current oversupplied market. The new official listings are said to be more realistic—and should mark the end to price competition that has been plaguing this key chemical for more than a year now.

Aluminum

Prices continue to edge up, with the average ingot market quote well above 90¢/lb. Fabricated product lines are tending to follow suit. But there could be some topping out by the second half as more metal comes onto the market. Don't expect any sharp correction—for operating rates will remain high and demand will hold up well. On the latter score, industry shipments this year are expected to reach 16.4 billion lb—up

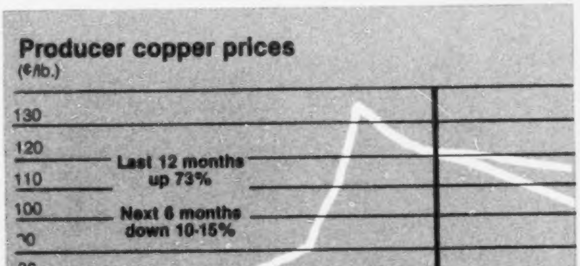
Copper

CURRENT SITUATION: Prices have slipped substantially under the $1.46/lb peak hit at the beginning of the year—both because of less speculative interest and because of the growing belief that supplies are easing up a bit. U.S. refinery inventories have been edging up of late—and U.S. mine output is now running better than 30% ahead of a year earlier. Supplies in the Far East and in Europe have also begun to accumulate.

DEMAND: The peak consuming season is coming to a close—and the red metal should be reaching its lowest point of the year by summer. Another demand-rise inhibitor: Construction, which chews up 43% of all copper, is taking a breather this year. Nor is the autos market likely to set records this year. Upshot: Domestic usage won't repeat last year's 3% increase. **Indeed, all signs point to about a 1-2% decline—bringing consumption as low as 2.3 million tons.**

SUPPLY: The metal, while not exactly abundant, is flowing onto the market more consistently. New production coming on stream will be hitting the market by midyear. Significant increases are seen in the U.S. (up as much as 9% this year), New Guinea, Chile, Canada, and Australia. All told, Free world output of refined metal could reach 8.7 million tons in 1988—up 4.7% from last year.

PRICE OUTLOOK: Copper is a market of excesses—so big swings can't be ruled out. **Basic fundamentals suggest a drift down as the year wears on.** Another 10-20¢/lb. could be shaved by early fall. But because quotes were recently at record levels, the 1988 yearly average will remain high—probably above the 84-85¢/lb reading of 1987. **On the other hand, the longer term looks good for buyers—as lower production costs and new output pressure prices downward.**



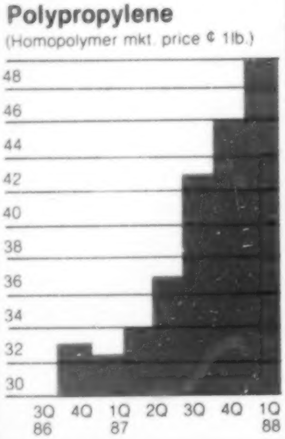
1-2% from last year. Continued increases in exports and declining imports will have positive impacts on the above shipment estimate.

Natural gas

The combination of a cold winter and changing Federal regulations have pushed prices up some 30% above year-ago levels. Gas at the wellhead now commands about $2/Mcf—well above the $1.30-1.50/Mcf quote of last winter. Equally significant, many suppliers are producing gas from wells that only a year ago were closed down due to poor demand. On the other hand, there's little danger of any near-term shortage. The American Gas Association sees no supply problems until 1990—the year when an estimated 18 Tcf of demand should effectively wipe out the industry's current surplus.

Polypropylene

Another few cents have been tacked onto the market quote—with homopolymer resin now fetching close to 50¢/lb—far above just a year ago when this plastic was available for 34¢. A combination of factors is behind the run-up—including 1) booming demand—up 13% last year and probably another 7% this year, 2) low stocks—half the normal 30-day supply, and 3) full-capacity operating rates. But some relief on the supply side is on the way, as 1.6 billion lb of new capacity is brought onstream over the next two years. This should be enough—despite demand gains—to bring operating rates down to 96% this year and 89% in 1989.



Styrene

Prices continue to climb—with another 4¢/lb increase bringing the going contract tag up to 46¢/lb. And the bullishness is likely to continue as supplies remain tight in part because of anticipated downtime moves by some four major producers. Another sign of strength: High export prices which in recent weeks have risen near 70¢/lb. There's continuing strong downstream demand—with polystyrene requirements expected to rise some 5% this year—all on top of last year's big 8.5% jump.

Microcomputers in manufacturing

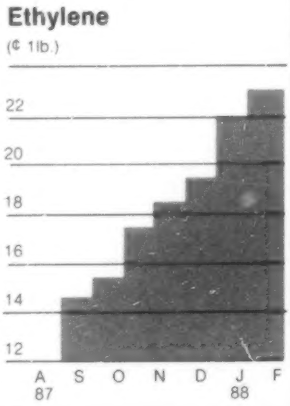
Micros are beginning to make it to the factory floor. Some $666 million was earmarked for these machines last year, and the figure in volume terms is expected to more than double by 1991, with most of the growth earmarked for physical control operations rather than information processing applications. So say analysts at Frost & Sullivan, who feel this growth will take place despite the availability of programmable logic controllers (PLCs). Reason: Cost. As a spokesman for the firm observes, "It is now possible to buy at least two micros, both with 20 million bytes of hard disk memory, for less than the list of 8,000 bytes of add-on memory for a PLC."

Lead

New easiness has knocked prices down into the mid-30s range. Nor is any significant rally likely now that the battery-maker buying season is over. Somewhat higher inventories also suggest weakness. Ditto, domestic consumption which will barely top last year's—reaching only 1.177 million metric tons. One bullish factor: An expected pickup in replacement battery demand because autos sold in the good 1984 and 1985 selling years will be approaching the end of their average battery life spans.

Zinc

Prices have edged up another cent into the 46¢/lb range. Reason: Some temporary tightness through March as demand from both galvanizers and brass producers remains strong. But some softening is expected by late April or May as supplies increase. Also U.S. demand is not expected to be all that robust this year, with chew-up put at only 1.040 million metric tons—not all that much above the 1.014 million estimate for 1987. True, galvanizing use will be up again. But only a fractional increase is seen for brass goods—and die-casting consumption could actually fall by about 3%.



Ethylene

Add another cent to the overall price—as tags move up into the 23¢/lb range, some 10¢ above last summer's lows. Blame it on generally tight supplies—with a further rise in prices to near 25¢/lb possible by sometime around midyear. On a rosier note, additional capacity is on the way—notably in the form of numerous small de-bottlenecking projects. More important, a few new grassroots plants (by Dow and Phillips) are now in the planning stages.

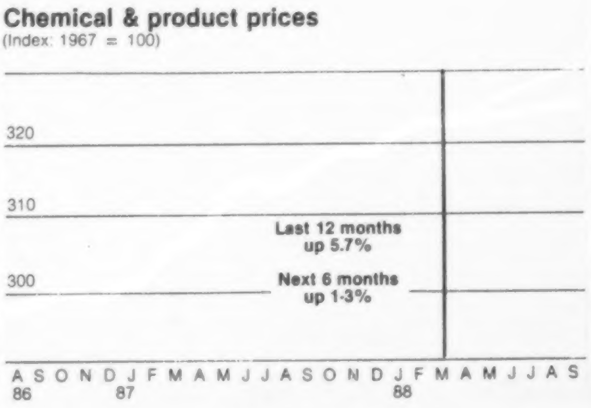
Chemicals and allied products

CURRENT SITUATION: This $215 billion-plus industry is off to a good start in 1988. Orders are coming in at a nice clip—and this on top of a bullish demand performance in 1987. **Prices are still a headache for many buyers—as new increases continue to be posted in such key areas as organics and plastics**—on top of a 6% increase last year. Other price boosts noted for 1987: overall industrial chemicals (4%), paints (1%), drugs (7%), and agricultural chemicals (3%).

DEMAND: Look for an advance this year—smaller than 1987's—of about 4% overall. Optimism is confirmed by the 70% of producers surveyed who are upbeat about 1988—and the other 30% are neutral. The Chemical Manufacturers Association is calling for an 8% dollar gain which would still allow for a fairly big volume advance. Gains predicted for individual sectors: plastics (4%), manmade fibers (1%), drugs (2%), paints (5%), organics (4%), chlor-alkalis (4%), and industrial gases (3%).

SUPPLY: Spotty shortages have been noted in recent months—but by and large there's enough to go around. More capacity is on the way—the industry is increasing its capital spending budget by a significant 14% this year—as more money becomes available from retained earnings and depreciation. And only 10% of the total outlay will be earmarked for overseas expansion, preventing a big jump in factory operating rates. Look for a fractional advance to 3.5% for 1988.

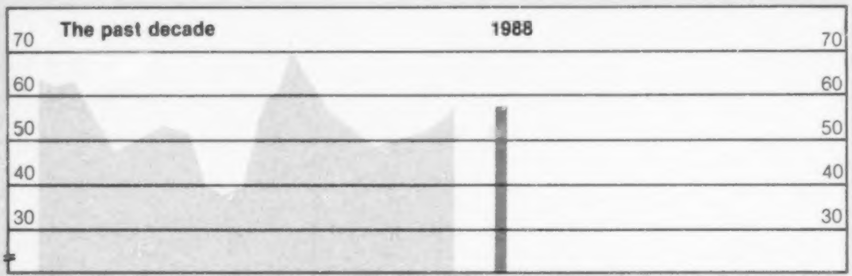
PRICE OUTLOOK: Increases will be less severe than last year's. Demand won't be quite as robust and petrochemical feedstocks have softened in line with weak crude oil tags. **Overall, this suggests a 4% annual advance for 1988.** Plastics, however, may advance by 6% because of a tight market situation.



BUSINESS DATATRAK

N.A.P.M. business barometer

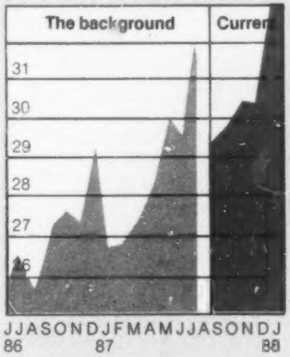
Based on five indicators (employment, inventories, new orders, production, vendor performance)



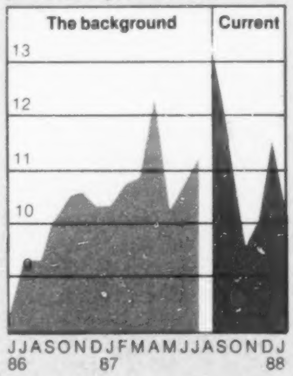
Source: Commerce Dept.

Leading indicators

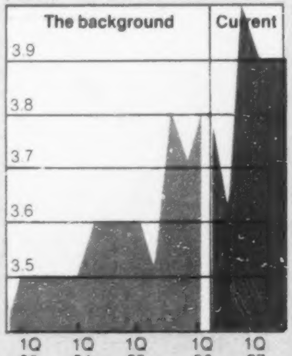
1. Capital goods orders
(mil. of $, seas. adj.)



2. Auto sales
(mil., seas adj., annual rate)



3. Factory overtime
(hours)



KEY ECONOMIC TRENDS

Slowdown, not downturn

There's a lot of talk about a slowdown being bandied about these days. Such deceleration would be from bigger-than-expected fourth quarter real GNP gains.

But, a slowdown is not the same as a downturn—and the latter is still nowhere in sight. Inventories were built up over the past quarter, but most of this was centered in imported goods where consumers have apparently been balking at higher prices.

To the extent this is true, any near-term inventory impact will be to cut down on imports rather than domestic production. The fact that domestic orders are still on the increase would certainly seem to confirm this evaluation.

Then, too, exports are also increasing in real or volume terms. Other things being equal, this has to have a positive impact on U.S. production activity. One sign of the shift here: A new Dun & Bradstreet survey of 5,000 companies which shows 45% recently experiencing increases in export orders.

Also on the reassuring side: The NAPM business barometer remains well above the neutral 50 mark—57.4 at last report. Another confirmation of buoyancy comes from new plant and equipment surveys, which show American industry planning to spend close to $420 billion on capital items in 1988—up 7% from 1987. Given current price trends, this also indicates a real gain of near 5%.

These capital spending estimates are likely to be attained because of growing U.S. need for new capacity. The typical American factory is now operating at above 82% of its potential—the highest such level in nearly a decade. And with earnings up, an increasing number of American firms also have the wherewithal to finance new expansion.

The consumer sector isn't all that weak, either. Spending totals are down from recent highs, but not by much. Autos are a case in point. Early 1988 sales have been running at over a 10 million unit annual rate—down from the 3Q 1987, but above year-earlier readings.

And consumer attitudes suggest that the next few quarters will be strong, too. The Conference Board's confidence index, for example, has actually been climbing recently—recovering about two-thirds of the loss registered after the stock market plunge.

True, anticipated car purchases over the next few months indicate some decline. But plans to buy new homes are up.

The employment situation also suggests a fairly stable near-term consumer buying trend. The jobless rate, for example, is holding at a low 5.8%. And factory overtime—a measure of possible new job openings—remains unchanged at a relatively high 3.9 hours.

There are weaknesses, however—especially with the lingering stock market uncertainty. But this should not be enough to prevent continued, albeit modest, advances through the first half.

This ***PW*** forecast sees industrial production rising at a 1-2% annual rate over the next few quarters. While down a bit from late 1987 readings, that's still enough to keep GNP solidly in the plus column.

Fringe benefits increase as a percentage of payrolls

Pay hikes may continue to be modest, but judging from fringe benefit reports, the typical employee is getting more compensation indirectly—in the form of insurance, pensions, vacations, etc.

A new U. S. Chamber of Commerce survey finds that fringes for the nation as a whole come to 39.3% of company payrolls. And, if you zero in on the manufacturing sector, the figure is even higher—something in the order of 42% at latest report.

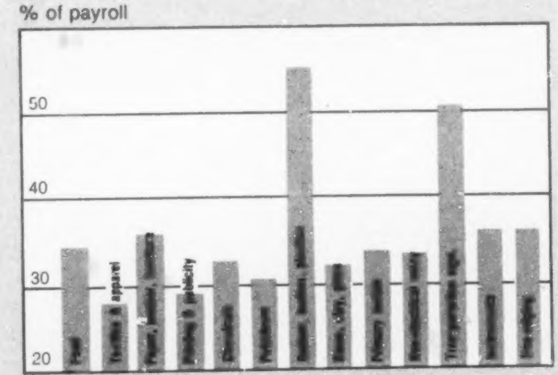
Keep in mind, however, that these represent about a 5% jump over the past decade. Other key findings of the just-released study:

- Payments vary widely among reporting companies—ranging from less than 18% of total compensation in a few cases to over 65% in an even smaller number of instances. In dollar terms, this means anything from less than $3,500 to over $13,000 a year.
- The average payment in 1986 (the latest available period) came to $4.96 per payroll hour; or over $10,000 a year per employee.
- More than one fourth of all benefits go for vacations, sick leave, etc. Other big percentages are earmarked for Social Security and other mandated payments (23%), medical benefits (21%), and retirement (17%).

There is significant variation in the fringe benefit programs between industries. At the bottom of the ladder are textiles and apparel where less than 29% of payroll is earmarked for fringes. The highest percentage is in the rubber and plastics industries (57% of payroll).

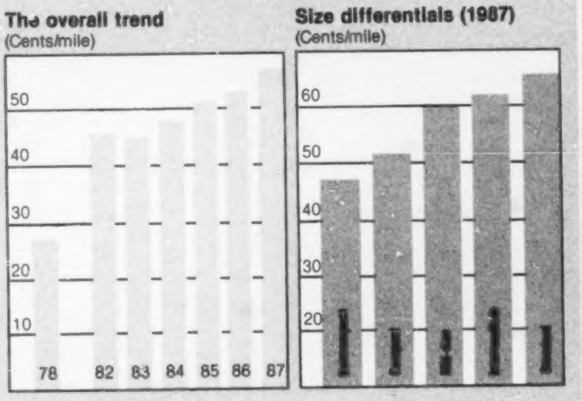
- Highest payments generally go to workers in the East North Central states, with most other regions clustering around 35-36% of payroll. Also, large firms tend to pay more benefits than smaller ones.
- Pension payments are reported by 88% of the firms. And insurance programs have become almost universal. Thus, 98% of queried companies pay some health insurance, with another 93% providing at least some life insurance.
- Employee payroll deductions are as follows: 2.7% for pensions and savings plans; 0.7% for hospitalization and surgical insurance; and 0.8% for life insurance and other benefits.

Fringe benefits—Industry by industry



Source: US Chamber of Commerce (based on 1986 data)

The high cost of driving



Source: Hertz
Assuming car is held 5 years and is driven 10,000 miles per year.

Fleet costs increasing

Owning and operating a fleet or personal car doesn't come cheap these days.

Indeed, if a new Hertz study is correct, the cost comes to more than 51¢/mile for a new, normally equipped, compact (assuming the vehicle is kept five years and is driven 10,000 miles per year). Equally significant, this represents a substantial 5.5% boost above year-earlier estimates.

Moreover, upgrade to an intermediate or standard-size vehicle, and the comparable costs rise to 61¢ and 66¢/mile respectively. And while tabs for the subcompact models come to only 47.5¢/mile, the cost for this type of vehicle has been rising at the fastest clip—advancing almost 18¢ over the past year.

Hertz figures also demonstrate that keeping cars longer can save a lot of money. Specifically, new compacts driven 10,000 miles a year but traded annually cost 62.5¢/mile while ones held for 10 years with the same annual use pattern average out at only 39.8¢/mile. That's a gap of 22.7¢/mile—equivalent of $22,700 over the assumed 10-year life of a car.

Another key finding: Some 75% of all outlays are for so-called fixed expenses such as depreciation, interest, insurance, licenses, taxes, and fees—items largely influenced by the car's purchase price and how long the vehicle is driven. On the other hand, variable costs (gasoline, oil, maintenance, etc.) comprise only about one-fourth of total outlays.

But these variable costs can differ. Example: Parking and tolls in major cities (excluded from the above cost estimates) can add 10-40¢/mile to the average tab. Moreover, driving patterns differ—and this could affect costs for similar autos in the same locale, even if driven for equal mileage and use periods.

Hertz also finds that the trend continues toward smaller cars and longer gaps between trade-ins. On the size score, compacts rather than intermediates are the most typically purchased—and most vehicles are about a foot shorter than they were 15 years ago.

As for car life, new cars are kept an average of 5.4 years against 3.6 in 1972. And the average age of all cars on the road is now 7.6 years—up 1.9 years from the early 1970s.

This month's breakdown

	Latest level Index: 1982 = 100 (January)	% change from: Month ago	Year ago
Bearings	109.5	1.1	1.8
Bolts, nuts, etc.	104.7	−2.9	1.7
Chemicals, inorganic	96.1	0.1	2.0
Chemicals, organic	99.7	1.7	10.4
Concrete products	109.6	0.2	0.2
Corrugated cartons	NA	NA	NA
Cutting tools, small	106.6	0.1	0.0
Electric lamps (bulbs)	121.4	−0.1	0.7
Electronic components	115.8	−0.2	0.4
Fans and blowers	113.1	0.8	2.4
Foundry and forge products	107.1	0.5	1.7
Fuel oil (residual)	45.8	−7.8	2.0
Furniture, commercial	121.2	0.8	3.7
Gasoline	53.8	−5.6	3.7
Glass, flat	108.3	−1.1	2.7
Glass containers	112.6	0.1	0.1
Gypsum products	120.5	−0.7	−10.0
Hand tools	118.4	0.2	3.8
Hand tools, power driven	110.6	0.9	1.0
Industrial furnaces	118.0	2.1	3.9
Integrating and measuring instruments	115.7	0.9	2.4
Internal combustion engines	110.3	0.5	1.8
Lubricating oil	102.1	4.4	5.5
Lumber millwork	119.6	0.2	4.3
Material handling equipment	105.9	0.3	1.8
Metal containers	108.5	0.4	−1.3
Metal mill shapes (nonferrous)	122.3	3.0	24.2
Metal tanks	99.9	1.3	4.3
Motors and generators	118.0	0.3	3.6
Motor trucks	122.4	0.6	−0.2
Office and store equipment	105.9	0.5	2.9
Paperboard	122.7	0.0	7.7
Paper boxes and shipping containers	119.5	0.4	7.2
Paper office supplies	110.6	0.9	2.3
Paint	109.5	0.7	2.1
Plastic resins	119.8	2.3	16.8
Precision measuring tools	116.8	0.1	3.5
Pumps and compressors	106.2	0.4	1.3
Refractories	112.5	0.6	2.4
Rubber belts and belting	101.4	−0.9	−3.1
Scales and balances	104.8	0.6	1.5
Steel products	107.3	1.0	6.4
Switchgear	110.5	0.5	1.6
Textiles, synthetic fibers	92.9	−0.4	0.9
Textiles, gray fabrics	111.5	0.4	7.5
Tires and tubes	92.9	0.9	1.6
Transformers and power regulators	106.8	−2.6	0.1
Welding equipment	113.3	1.3	2.8
Wire and cable	133.4	8.3	31.7

CURRENT PRICES

Energy limits price advances

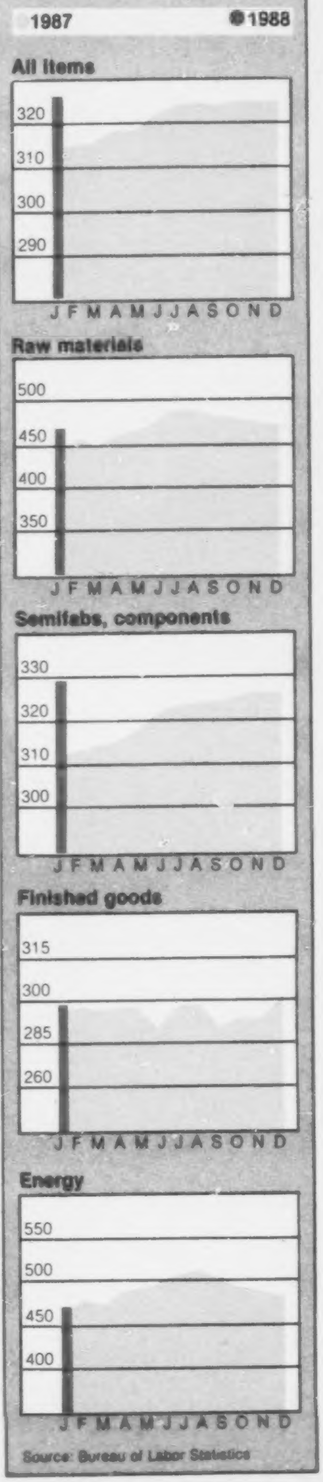
Credit falling energy quotes for again limiting the overall advance in industrial prices. Thanks to a big 3.2% falloff in this one sector, averages advanced only 0.2% (or about 2.5% at annual rate) over the latest month.

Big declines were reported in crude oil, gasoline, home heating oil, jet fuel, residual fuel, diesel fuel, liquid petroleum gas, and coal. About the only item to move up in the fuel and power sector last month was natural gas.

On a less rosy note, capital equipment continued to move moderately higher. Increases here were posted in construction ma-

Industrial prices

(Index: 1967 = 100)



Source: Bureau of Labor Statistics

chinery, commercial furniture, light trucks and metalforming machinery. These proved more than enough to offset declines in heavy motor trucks and transformers and power regulators.

Metals also remain a problem—with new increases in steel mill products (up about 1% over the month) leading the pack. Other boosts were noted in aluminum and aluminum products. On the other hand, copper showed the first signs of peaking out after a long climb.

Not so for chemicals, where gains continued—as substantial increases hit both organic chemicals and plastic resins. About the only positive news here was a small decline in synthetic fibers.

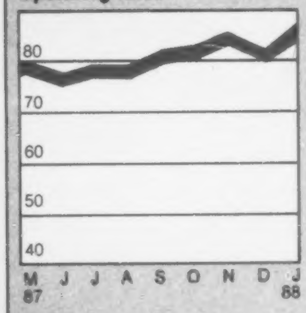
The component parts picture remained basically mixed. On the upside were aircraft parts, bearings and metal valves. But edging lower were electronic components and fasteners—with the latter category off by close to 3%.

Most of the changes are detailed in *Purchasing-World's* regular monthly rundown (see accompanying table). But note one difference from previous presentations. The latest index readings are now on a 1982 = 100 base—as contrasted to the old 1967 = 100 base. While this makes the index numbers a lot lower, it has no effect on the "percent change" figures shown in columns 2 and 3 of the table.

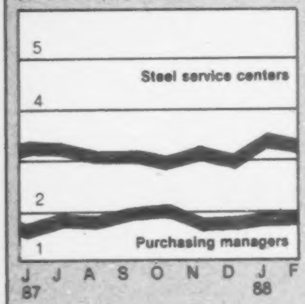
One interesting note, however: The overall index reading on the new base reads just above 104. Meaning: Prices on average have advanced only about 4% since that time—or less than 1% a year—a pretty good record coming off some of the double-digit rates of the late 1970s.

Steel

Operating rates

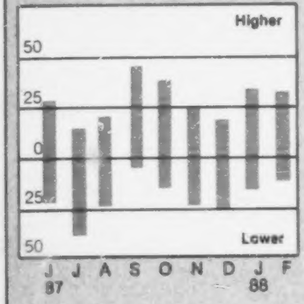


Inventories
(Months supply on hand)

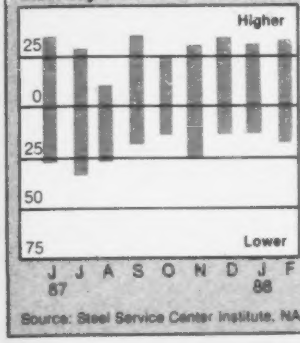


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyer



Import prices
(Compared to domestic)

Steel buyers

ABOVE 37%
SAME 34%
SLIGHTLY BELOW 29%
SUBSTANTIALLY BELOW

Service centers (carbon)

ABOVE 11%
SAME 85%
5-10% BELOW 4%
10-20% BELOW 0%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

STEEL SCENE

High demand puts pressure on steel prices

There are still very few signs of a near-term steel buying slowdown. Growth has been the order of the day since last fall. Judging from the latest buyer and service center surveys, demand should continue brisk into spring.

The number of buyers anticipating an increase in steel receipts over the next three months (37%) is now running better than double the number expecting declines (17%). Equally significant, the 37% figure pointing to increases is the highest such reading in several years.

The distributor view—culled from the latest Steel Service Center Institute (SSCI) study is even more bullish. Specifically, 38% of SSCI respondents anticipate increases in new orders over the coming months—more than three times the 11% who feel some contraction is likely.

This, in turn, helps explain why almost all buyers remain concerned about availability. Biggest worries are centered in plate, hot rolled steel, cold rolled sheet, coated sheet and stainless.

On the other hand, some of these worries may be exaggerated. There are signs that demand could be topping out before too long. Certainly projections for durable goods production gains—only at a 1-2% annual rate over the next few quarters—would seem to indicate some leveling off in steel demand by spring and summer.

Such a flattening is also suggested by SSCI president Andrew G. Sharkey. While he remains confident about 1988 as a whole, he estimates that total distributor shipments will be between 22.5 and 23.5 million tons—pretty much unchanged from this past year's 23 million tons.

Sharkey also expresses some concern about inventory building, noting that stock on the service center level has edged up in recent months. He puts most of the increase in carbon flat-rolled and stainless steel products, with much of the impetus coming from hedge buying to beat anticipated price increases.

Similar hedging pressures probably were also at work on the steel buyer front. In any case, holdings are now put at a 1.96 months supply—again a noticeable jump over late 1987 readings.

This tendency toward somewhat heavier inventories is also borne out by the fact that 21% of buyers responding feel stock levels are too high while only 8% feel they're too low.

Service centers are pretty much in agreement here. Some 38% now rate their stocks as too high, versus only 11% who say they're too low. More important, this is the first time since last summer that the "too high" rating has predominated.

All this—despite the fact that the majority of service centers are bracing for still more price increases. Specifically, 88% are still talking in terms of higher metal replacement costs over the next six months.

About the only ray of hope here, if one can call it that, is that just 4% now believe steel quotes could actually fall by autumn. That compares to the fourth quarter of 1987 when not a single distributor was betting on a price decline.

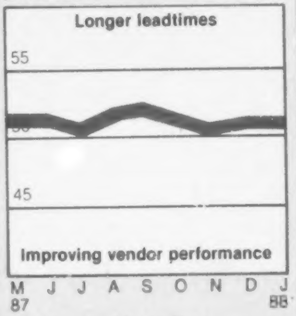
But while this slight hope of domestic price relief has crept into the overall figures, the same can not be said of imports. Service centers are virtually unanimous in noting that overseas carbon and stainless steels are now more expensive than their domestic counterparts.

And the situation isn't all that different in the buyers sphere. Just 2% say import prices are lower, but in all cases the differentials are quite small—certainly nothing like the bargains that were available just a few years ago.

Monthly procurement status report

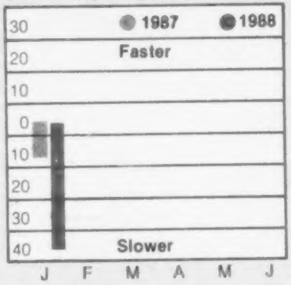
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



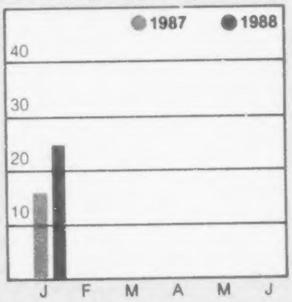
Delivery performance

(Percent reporting deliveries)



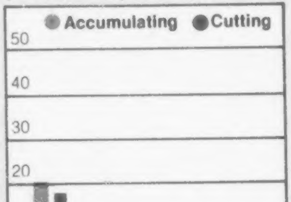
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

PROCUREMENT STATUS

Lead times are stretching out

Blame bigger-than-anticipated production gains for those still stretching lead times.

Sign of the times: *PW's* exclusive lead time index has edged up into the 52 range (two points above the neutral 50 mark). Nearly one of every three items monitored on a regular basis now takes longer to deliver than one year ago.

NAPM speed-of-delivery statistics tell much the same story. The number of buyers reporting slowdowns (30%) now tops those experiencing speedups (4%) by a better than 7:1 margin.

Some 12 items are now on the NAPM hard-to-get list. These include aluminum (particularly ingot), copper, hot- and cold-rolled steel sheets, steel plates, galvanized steel, stainless steel, tubing, ethylene, polyethylene, other plastic resins, methanol and titanium dioxide.

Buyers are trying to beef up their inventories. More purchasing managers added to, rather than subtracted from, their overall stocks in the past month—the first time since last fall that this has happened.

Why all the procurement problems? Part, of course, can be attributed to increased industrial activity; an increase that is largely fed by rising exports. On the latter score, some 39% of firms that export say their overseas orders are up—far outweighing the minuscule 3% who report a dip in export business.

Another factor has to be foot-dragging in capital spending. Superimpose this on a rising production curve and it helps explain why the average factory operating rate is now approaching the 83% mark—pretty close to the 85% level when bottlenecks generally become endemic.

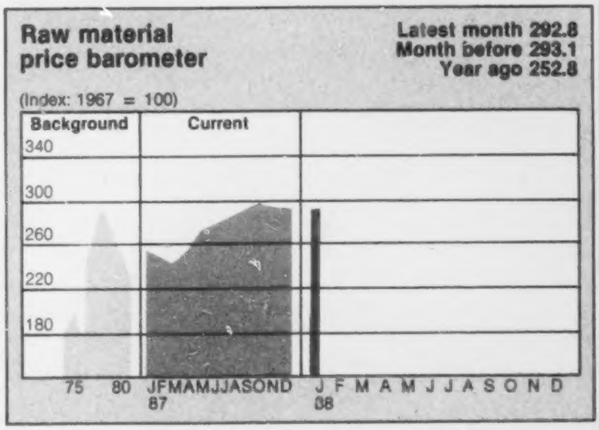
Procurement status report

Chicago: Aluminum coil and sheet have stretched (to 16-22 weeks); common alloy plate is out to 12-20. But aluminum bars and angles are in (to 4-8). Capacitors are also in (to 10-16). But other electronic components remain the same.

Los Angeles: No problems with steel bar and coil (still at 2 weeks); ditto standard fasteners (4), steel strapping (2), and polyethylene bags (4). Somewhat longer leads are noted for standard valves (10-12), standard bearings (20-24), wire-round and metal film resistors (8-12), and linear ICs (30).

Philadelphia: Steel mill products are out to these new weekly waits: stainless hex, round shapes, and round coil (18-20), carbon hex and round shapes (12-14), carbon and alloy seamless tube (4), and stainless extruded tube (14).

BUSINESS DATATRAK



Raw material price barometer

Latest month 292.8
Month before 293.1
Year ago 252.8

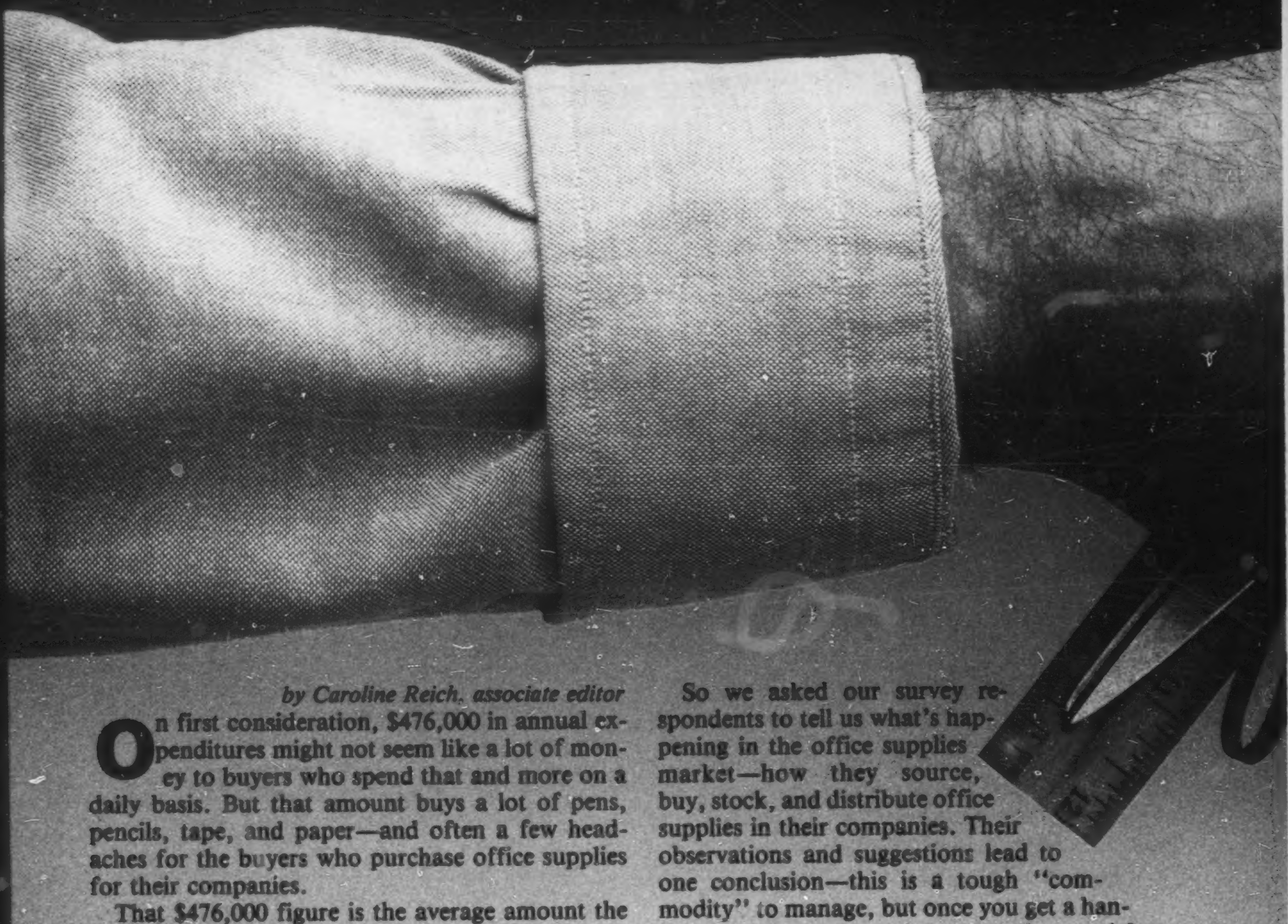
(Index: 1967 = 100)

Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	[illegible]13.00	213.00	213.00
Steel, billets, Pitts., net ton	[illegible].00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	[illegible]90	23.90	23.90
Steel, structural shapes, Chi., cwt.	[illegible]0	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	2[illegible].90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	23.95
Steel, bars, Pitts., cwt.	16.50	16.50	23.95
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	31.00
Steel, plates, Pitts., cwt.	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	28.15	28.15	26.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	.920	.890	.570
Antimony, N.Y., dealer, lb.	1.14	1.12	1.03
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	1.72	2.04	1.29
Brass, yellow, [sheet], lb.	1.67	1.99	1.24
Cadmium, N.Y., dealer, lb.	3.50	3.00	0.95
Copper, electrolytic, wire bars, refd., lb.	1.08	1.40	.65
Copper sheet, over 24 in., lb.	1.81	2.13	1.38
Lead, common, N.Y., lb.	.370	.380	.260
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	360.00	345.00	210.00
Molybdenum, oxide, dealer, lb.	3.15	3.03	3.10
Nickel, cathode, dealer, lb.	3.80	3.80	1.78
Platinum, dealer, oz.	445.00	500.00	524.00
Silver, N.Y., oz.	6.43	6.81	5.54
Tin, N.Y., dealer, lb.	3.15	3.20	3.17
Zinc, Prime West, East St. Louis, lb.	.46	.45	.38
Zinc, die casting alloy, No. 3, lb.	.515	.505	.465
PAPER			
Uncoated book #3 offset, ton	890.00	890.00	860.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	17.09	17.07	16.29
Grocery sacks, ton	435.00	435.00	390.00
Solid bleached paperboard, ton	650.00	650.00	620.00
Kraft linerboard, 42 lb., unbleached, ton	380.00	380.00	330.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd	.276	.274	.238
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.240	1.240	1.085
Cotton middling, 1", N.Y., lb.	.564	.600	.530
Printcloth, 48", 80x80, N.Y., spot, yd.	0.92	0.92	0.95
Army duck, 37", 13 oz., yd.	1.510	1.510	1.405
Blended printcloth, 64", 78x54, yd.	.72	.80	.82
20s combed yarns	2.00	2.00	1.77
Wool 64s, Staple, lb.	3.87	3.00	2.00
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	75.00	75.00	80.00
Benzene, petroleum, tanks, Houston, gal.	0.95	0.85	1.20
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.685	.780	.910
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.49	.44	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.32	.32	.27
Polyethylene resin, low density liner film grade (market place), lb.	.425	.385	.290
Polypropylene, homopolymer grade (market price), lb.	.495	.470	.345
Polystyrene, general purpose grade (market price), lb.	.55	.55	.39
Polyvinyl chloride, pipe grade (market price), lb.	.390	.380	.305
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.[illegible]%, tanks, lb.	.46	.42	.26
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	152.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.800	.800	.770
Xylene tanks, gal.	.760	.745	.765
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	320.05	320.35	322.90
Lumber 2x2 pine, mbf, cl	322.55	322.10	314.40
Plywood, plyform, ¾", msf, cl	568.90	569.85	585.05
Plywood, ⅝", msf, cl	397.85	395.45	384.95
Cement, bulk, ton, tl	64.07	63.73	63.28
Sand, ton, cl	7.31	7.31	6.70
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.84	47.42	48.07
Crushed stone, 1½", ton, cl	8.34	8.26	8.08
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.92	0.91	0.84
Gypsum sheathing, ½"x1"x8", msf, tl	225.54	225.54	213.52
Brick, common, per thousand, tl	201.12	200.91	186.96
Asphalt paving, AC-20	139.05	139.37	124.05
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.58	7.57	7.36
FUELS			
Fuel oil, No. 6 or Bunker C, Gulf., bbl.	11.50	14.75	11.50
Fuel oil, No. 6 or Bunker C, N.Y., barge, bbl., reseller	19.50	19.75	17.00
Gasoline, 91 oct., reg., Los Angeles, rack, gal.	.540	.560	.375
Gasoline, 94 oct., reg., Chi., tank car, gal.	.495	.540	.428
Heating oil, No. 2, Chi., bulk, gal.	.550	.585	.430
Heating oil, No. 2, N.Y., bulk, gal.	.563	.568	.438
Heavy fuel, PS 400, Los Angeles, rack, bbl.	26.50	26.50	26.50
Jet kerosene, gal.	.528	.553	.433
LP-Gas, propane, Okla., tank cars, gal. [incl. discount]	.260	.260	.240
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	124.00	102.00	83.00
Steel, No. 1 hvy., dlvd., Chi., ton	117.00	100.00	77.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	0.880	1.130	0.555
Copper, No. 2, East, wholesale buy, dlvd., lb.	0.785	1.035	0.480
Brass, red, East, wholesale buy, dlvd., lb.	0.840	1.090	0.515
Brass, yellow, East, wholesale buy, dlvd., lb.	.415	.425	.330
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.575	.550	.355
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.660	.645	.380
Zinc, old, East, wholesale buy, dlvd., lb.	.20	.20	.20
Lead, clean solids, East, wholesale buy, dlvd., lb.	.240	.240	.155
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	25.00	28.00
Paper, old corrug. box, dlr., N.Y., ton	10.00	10.00	22.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.09
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.23	.23	.11

[Sources: Metals Week, Engineering News-Record (20-city averages), Platt's Oilgram Price Service.]

Get a grip on office supplies



by Caroline Reich, associate editor

On first consideration, $476,000 in annual expenditures might not seem like a lot of money to buyers who spend that and more on a daily basis. But that amount buys a lot of pens, pencils, tape, and paper—and often a few headaches for the buyers who purchase office supplies for their companies.

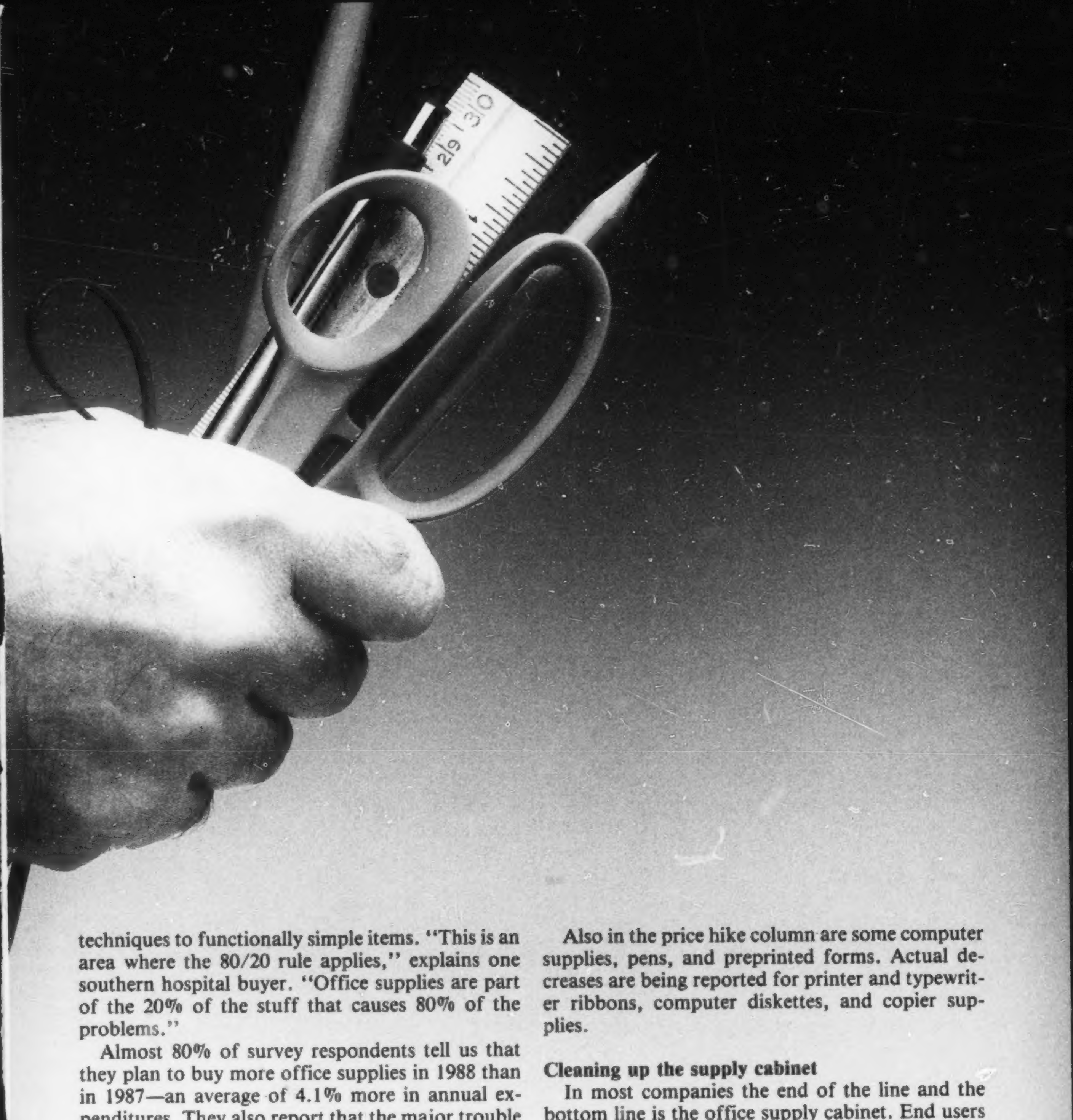
That $476,000 figure is the average amount the respondents to *PurchasingWorld's* annual office supplies buyer survey expect to spend on office supplies in 1988. And some survey respondents spend much more—four spend more than $4 million annually on the "small" items (pens, pencils, paper, desk accessories, diskettes, rubber bands, paper clips, tape, staplers, etc.) that keep today's office running smoothly. Anyone who spends that much on such a complex sector must have a good idea about what it takes to put order into office supplies buying.

So we asked our survey respondents to tell us what's happening in the office supplies market—how they source, buy, stock, and distribute office supplies in their companies. Their observations and suggestions lead to one conclusion—this is a tough "commodity" to manage, but once you get a handle on it, there's lots of money to be saved for your company.

On the price front

Office supplies are especially difficult to manage because they tend to be high-volume, low price point items. Add in the special problems of buyers who are purchasing for multiple locations (a growing phenomenon) and it's easy to see why savvy buyers are focusing on better buying here.

The challenge is to apply sophisticated buying



techniques to functionally simple items. "This is an area where the 80/20 rule applies," explains one southern hospital buyer. "Office supplies are part of the 20% of the stuff that causes 80% of the problems."

Almost 80% of survey respondents tell us that they plan to buy more office supplies in 1988 than in 1987—an average of 4.1% more in annual expenditures. They also report that the major trouble spot is in paper and related supplies. Several respondents report that they have been put on allocation and are facing price hikes of as much as 11% on some lines. Several companies are lucky enough to have negotiated long-term contracts for paper. National Broadcasting Company (NBC) in New York, for example, holds a 2-year contract with price protection for its stationery purchases. "Without the contract," says Tom O'Grady, director of general purchasing, "we'd be facing 3-5% increases this year."

Also in the price hike column are some computer supplies, pens, and preprinted forms. Actual decreases are being reported for printer and typewriter ribbons, computer diskettes, and copier supplies.

Cleaning up the supply cabinet

In most companies the end of the line and the bottom line is the office supply cabinet. End users really don't care how purchasing gets the supplies into the cabinet or how much the company saves on each pen. If they need a bottle of correction fluid or a ream of copy paper and it's not in the cabinet—purchasing will hear about it. So it is necessary for the buyer to keep a close eye on his customers' needs and usage patterns. Jay Peterson, technical buyer for Tonka Corp., Minneapolis, MN, stresses the importance of standardizing the items to cut down on the number of brands and items carried. Instead of using 20 different styles of pens from five different companies, he suggests, limit your purchases to one or two brands for each type of item. This tactic has lead one midwestern office supplies buyer to reduce her vendor base and number of invoices by half.

About 80% of survey respondents have put together a "laundry list" of most commonly used supplies. Many conducted extensive user surveys to determine brand preferences, consumption levels, and specific needs to build the list. They use this list as a requisition form for each company department—and as the basis for soliciting bids for contracts from office supplies vendors.

Some particularly inventive buyers have actually done away with supply cabinets entirely. One large northeastern insurance company has a central "company store" where all office supplies are dispensed. Another smaller firm has each employee fill out an order form quarterly on the items he or she will need for that period.

The inventory issue

It seems that the first place our survey respondents look to cut office supplies costs is inventories. Bloated inventories spell wasted dollars. So it's not surprising that stockless purchasing programs of some type are in effect at 53% of respondents' companies. The most common method is for a company to negotiate a long-term blanket contract for the most commonly used products. Then internal requisitions are gathered weekly or daily and sent (often by computer) directly to the vendor.

For O'Grady at NBC, operating with almost no inventory is expected to work well. His department negotiated a national contract covering five company locations that allows requisitions to go from user departments directly to the vendor. "Employees may have a few items squirreled away 'just in case' but that's much better than overflowing supply cabinets in every department," O'Grady explains.

Stockless programs can be very effective at holding costs down, but two factors must be present for them to work: 1) a reliable dealer whose operation is capable of quick action, and 2) cooperative end-users. "You're more or less at the mercy of your dealer—playing it very close," comments one midwestern utility company buyer. Nearly every respondent in the survey stressed the importance of studying a vendor's setup and capabilities before doing business with it.

Other methods of keeping office supplies inventory under control suggested by survey respondents include:

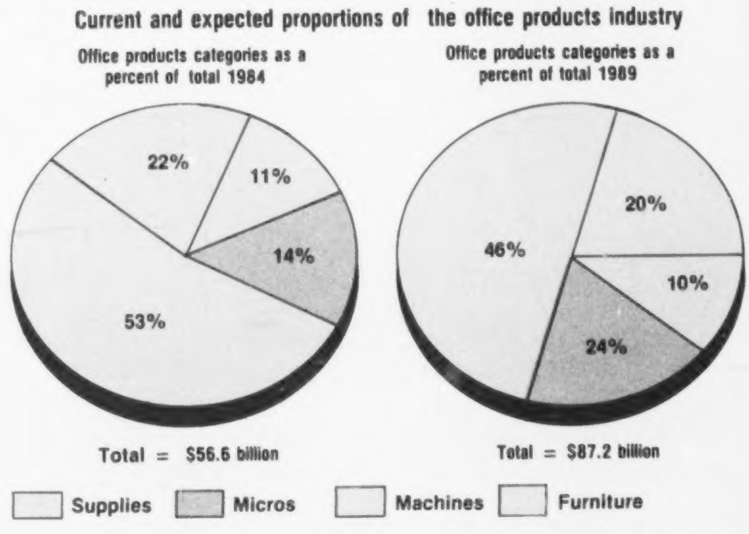
- Get your dealer to carry your inventory for you—on your company premises. In effect, the dealer would operate a store in your company, billing you only for what you use, when you use it. This arrangement has worked very well for National Liberty Insurance Co., in Frazier, PA according to corporate purchasing manager, Donna Moe.
- Stock only a small quantity of commonly used items.
- Use a computer system to track items and usage. Many dealers will install a computer hookup directly from a company to the dealer's facility.
- For small offices, manual inven-

Office supplies mix will change

According to a major study by the National Office Products Association (NOPA), the office products industry will ship $87.2 billion worth of goods (in 1985 dollars)—representing an annual growth rate of 9.0%. Office machines will grow the fastest at 7.1%—and at 13.1% if you include microcomputers. Office furniture will grow moderately, at 6.9% to reach $8.4 million by 1989. Growth in supplies will be slower at 5.9%, with shipments totalling $40.3 billion by 1989.

Technological change and increased competition will each affect the office supplies distribution channel. The NOPA study predicts that office products dealers will have to decide on which basis they wish to compete—price, service, or market niche. For buyers this means an even better choice of vendor options in the near future.

For more information about the NOPA Study, **Circle 11**



tory is still a viable method. However, survey respondents warn that it will only work if inventory counts are done frequently and if record-keeping is extensive.

How buyers buy

How companies manage their inventories has everything to do with where they buy their supplies. Today, dealers and distributors are offering a myriad of inventory-related services as a way of enticing new customers. A buyer can select a "full-service" dealer with whom he can hook up electronically for ordering, billing, and the like—or he can go in the opposite direction and buy from a "no-frills" direct mail order house and get super-low prices but no special services.

Our survey revealed that most buyers want and need the help dealers can give them in getting control of office supplies. Indeed, nearly 93% use local or regional dealers for the bulk of their supplies buying; 26% use local dealers exclusively.

Larger companies, especially those with centralized purchasing systems, may need the services of a national dealer or distributor. J.G. Schenk, purchasing manager of Westinghouse Electric Corp., Pittsburgh, PA, currently buys for several company locations on a national contract negotiated every three years with a large national distributor. Each location then orders its supplies directly from the distributor and the material is shipped to that location. Under such a system, companies get all the advantages of a local dealer with the volume discounts of a combined corporate purchase.

Another option which is gaining popularity for some buyers is the use of direct mail-order houses. These outfits sell a fairly limited selection of products at very attractive prices through a catalog. Thomas Christie, purchasing manager for Jostens Inc. Nashville, TN, says that he occasionally buys office supplies from mail order companies when they run a really good sale. "They may sell legal pads for 10% less than my dealer's discounted price and I'll buy. But you have to be careful because shipping costs can often eat up the cost savings you think you're making," explains Christie. He also adds that if the mail order price is only marginally better than his local dealer's, he'll go with the slightly higher price in order to maintain his strong relationship with the dealer.

Service for sale's sake

Smart buyers know that you can't put a price tag on good dealer service, especially when so many companies are operating with lean or non-existent inventories. Buyers responding to the *PW* survey indicate that they would like to see (in order of preference) faster deliveries, more efficient billing procedures, direct computer links for ordering and accounting, consigned stock programs, and more frequent sales contact.

In today's hotly competitive office supplies market, it only makes sense for dealers to listen to what their customers are asking for. The result is that some very innovative programs are now in place to streamline supplies buying. Here are some mentioned by *PurchasingWorld's* survey respondents:

- Rebates on orders placed
- Computerized order entry and automatic computerized billing and auditing programs
- Stockless inventory systems set up by the dealer
- 12-, 24-, 48-hour guaranteed delivery with price breaks for customer if shipment is late
- The use of bonus points accrued by customer for dollar totals of orders placed
- Payment perks such as 90- and 120-day billing, no finance charges, bonuses for immediate payment
- Free gifts and promotions
- Free delivery on large orders

As one respondent remarked, "If you're not getting these kinds of services, you're either dealing with the right vendor."

And the experts say...

We were very impressed with the creativity and professionalism our reader-respondents demonstrated in buying office supplies. They each have realized that office supplies buying is not a "nickel and dime" operation. We asked them to share some of their tips and advice for getting a grip on buying this unique commodity.

- Be sure that you develop a good record-keeping system. All those small items and hundreds of requisitions have a way of falling through the cracks if you don't keep a close watch. A computer can help here.
- Develop a "laundry list" or contract/item list to assist in requisitioning and bidding.
- Standardize the office supplies *and* equipment used at your company. It will make ordering facsimile and copier supplies a lot easier if they all use the same size or type of supplies.
- Cut down on the number of items stocked.
- Keep a list of model numbers for all typewriters, copiers, facsimile machines, computers, and printers in your company or location; keep this list handy for easy reference when reordering supplies.
- Sign long-term blanket contracts with a reputable vendor. Be sure to negotiate favorable payment terms, price protection, escalation clauses, delivery specs, etc. up front.
- If you are a very small volume buyer, consider banding together with other nearby firms to buy supplies as a group to take advantage of volume discounts. This also works for multiple company locations.
- Stay away from gimmicks and free gift offers—they usually end up costing more.
- Convince your office supplies vendor to carry your inventory.
- Find a good vendor and stick with it. Finding one may take months and negotiating a deal may take even longer, but remember that it costs money every time you switch vendors and it takes time, too.
- Be sure to ask for what you want. Go to potential vendors with a "wish-list" and stick to it.
- Specify carefully.

One last piece of advice from a California high-tech buyer seems to sum it all up: "Unless you consider office supplies as important a purchase as a piece of capital equipment or manufacturing materials, you won't buy right and that's no good for your company." ***PW***

Bulls in business equipment

by Robert S. Reichard, executive editor

Purchasing executives aren't the only group bullish on the business equipment industry. Marketing analysts at the Computer and Business Equipment Manufacturers Association (CBEMA) are calling for strong 1988 growth without any increase in prices. In fact, CBEMA predicts that prices may actually drop slightly over the next few quarters.

Equally important is the fact that CBEMA's long-range projections—into the mid-1990s—show little evidence that this trend will change much. Here are some of the 217-page study's key findings:

Overall 1988 demand

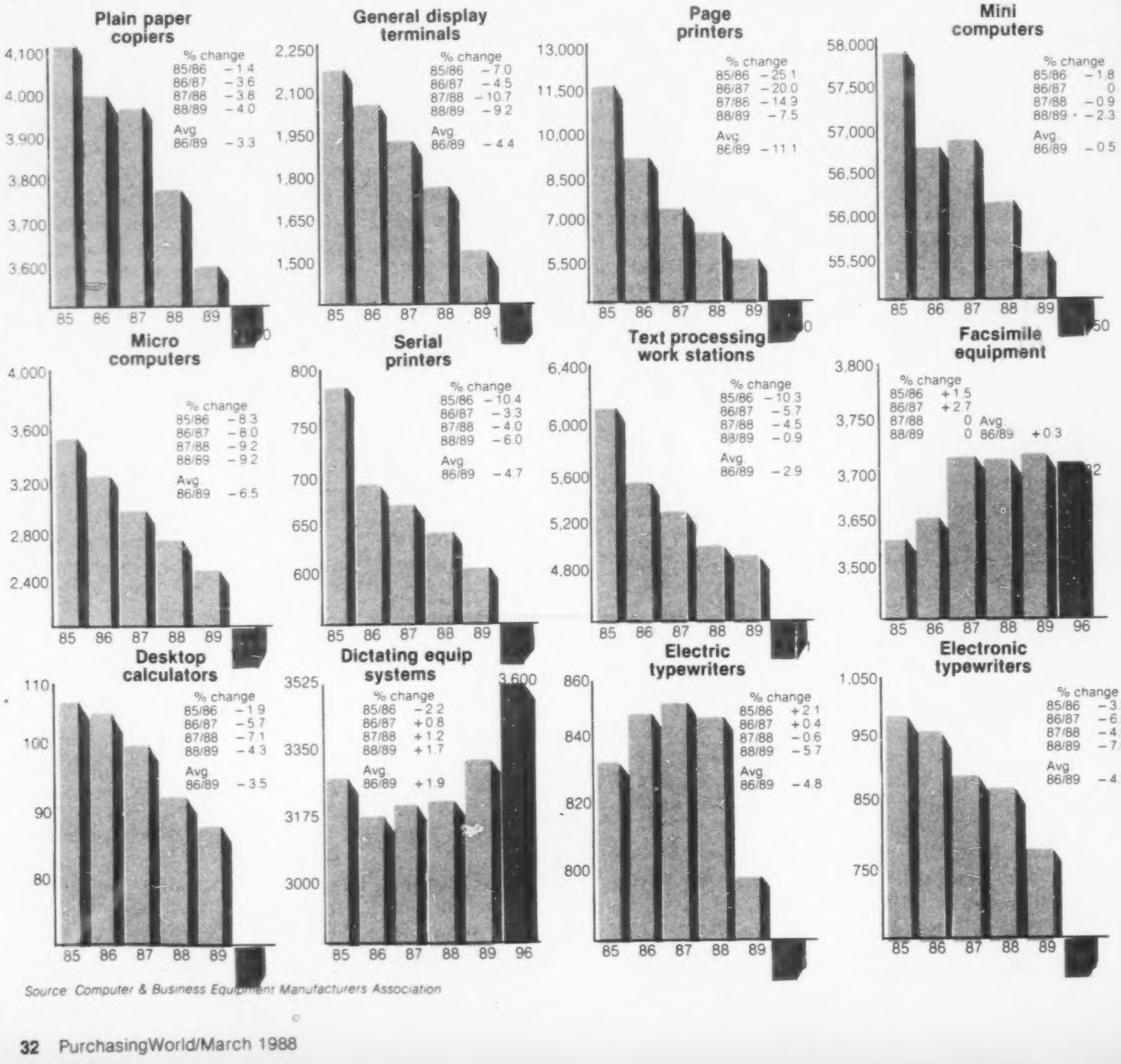
Purchases of computers and other business equipment (excluding telecommunications) should top $217 billion—nearly 10% above 1987 levels. Add in the telecommunications sector with its 8% growth, and $418 billion in purchases could clear the market this year.

Overall 1988 price trends

Comparing dollar and unit sales data suggests that the average unit quote may be falling in quite a few sectors (see chart). Even this might

Business equipment price trends— the industry view

(Average unit price in dollars)



Source: Computer & Business Equipment Manufacturers Association not tell the whole story—unit prices don't take into account the considerable upgrading that should continue in the high-tech field. Biggest unit price declines this year are projected for microcomputers and printers.

Long-term growth

Bullish demand should continue into the 1990s, aided by shortages of office workers and technological advances which will enhance office productivity and keep procurement costs low. Purchases of computers and related equipment are expected to exceed $255 billion by 1996—for an average annual growth of 9%. Software and services revenues will grow at an even larger 10.5% annual pace. This latter sector should exceed $120 billion, accounting for 27.5% of the computer industry's total revenues by the mid-1990s.

Over the same period, other types of business equipment (excluding manifold business forms) should increase at an average annual rate of 8.1%. Manifold forms will advance at a lower 6.5% annual rate.

The computer and business equipment industry as a whole (excluding telecommunications) is targeted to grow at a 9.2% rate. Totals will hit $443 billion by 1996 and will account for 5.3% of the U.S. gross national product.

Telecommunications equipment and services demand will grow at a less stellar rate of 5.9%. This segment should grow even more slowly than nominal (current dollar) GNP.

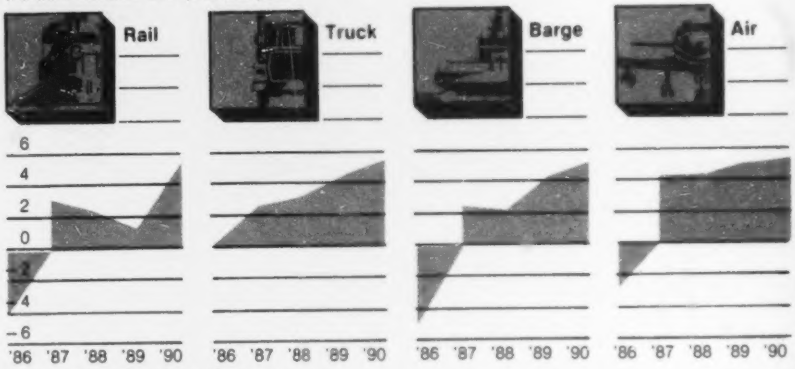
The major reason for this rather sluggish growth rate is a sharply declining price curve (due to competitive infighting among suppliers) rather than a levelling off of demand. Competition here will not be limited to telecommunications. In fact, buyers will be calling the shots in most business equipment product lines.

Here is a capsule summary of CBEMA projections:

- **Microcomputers:** Unit consumption between 1986 and 1996 should grow by 20.4% annually, while dollar value should rise at 13.9% annually. The implication is that prices will fall about 6.5% per year.
- **Minicomputers:** Dollar value over the next decade should advance at an 8.8% annual rate—with consumption more than doubling (to $12 billion) by 1996. Unit sales will increase at an average annual rate of 9.4%—to 220,946 units in 1996. Unit prices, therefore, are expected to remain fairly stable—edging down only 0.5% a year.
- **Mainframes:** Between 1986 and 1996, consumption is expected to rise 3.4% annually, reaching 13,800 units. The value of shipments will rise 3.3% a year—reaching $15.24 billion in 1996. Conclusion: Average unit prices of fifth generation mainframes (large-scale integration computers and supercomputers with list prices of more than $300,000) will remain relatively unchanged over the decade.
- **General purpose display terminals:** Unit sales by 1996 will fall to the 1.5 million level—representing an annual average decline of 2.4% from 1996. Dollar sales will drop even more sharply—from $3.8 billion in 1986 to $1.9 billion in 1996. This implies continued price cuts (to meet competitive pressures from microcomputers). This should be enough to bring average unit prices down to $1,294 by 1996—off about $2,000 from 1986. This would represent an average price decline of 4.4% per year.
- **Printers:** Sales of line printers have peaked. By 1996, unit sales are expected to decline to 19% of 1986's level. Their place is likely to be taken by page printers which are forecast to jump 29.2% a year in unit sales. Page printer prices should fall 11.1% annually over the same period. They should also make inroads against serial printers where market share in dollar terms will fall sharply from 42.8% in 1986 to 30% in 1996.
- **Calculators:** A pattern of rising unit sales and decreasing prices will prevail for both hand-held and desktop models—the average price erosion is estimated at about 3.5% annually. By 1996, desktop types will account for more than 85% of the industry's overall revenues—compared to the current 82% figure. But the cheaper hand-held types will continue to hold a bigger share of unit shipments—estimated around 65% of the market in the mid 1990s.
- **Copiers:** During the next decade, shipments of plain paper units (excluding machines priced under $500) are forecast to grow at 10% annually—reaching 3.2 million units by 1996. The dollar value will increase at a slower 6.7% annual rate as the industry's penetration of low-end markets continues and unit prices fall 3.3% (to an average $3,000 by the mid 1990s).
- **Dictating equipment:** Long-term market growth is put at 1.3% annually in volume terms and 2.7% in value terms. Portable models should lead in unit sales as they have in the past decade. But even here, growth will be only 1.7% a year. Contrary to trends in other business equipment sectors, unit price quotes will increase slightly—primarily because of increased product functionality.
- **Facsimile equipment:** After big recent gains, growth is expected to slow down a bit over the next 10 years as 1) the market becomes more mature, 2) competition from the paperless office heats up, and 3) prices stabilize near current levels. Nevertheless, unit shipments should still sport a healthy 9.4% annual growth rate, with value advances in the 9.7% range.
- **Text processing workstations:** Unit sales over the next 10 years should grow at a 13.4% annual rate—to over 2.3 million units by 1996. That's more than triple the 660,000 figure of 1986. Prices should fall by about 3% per year. More relatively inexpensive personal computers dedicated to text processing will take an increasing share of the market—as electronic typewriters peak and then decline.
- **Typewriters:** Electronic types should take over the office typewriter marketplace as product enhancement and falling unit prices (declining at about 4.7% annually) make the electronic units more desireable. Nevertheless, unit sales for electronic models are projected to drop slightly (about 0.6% a year) as competition from PCs and text processors intensifies. Even bigger unit declines are indicated in electric typewriters—volume is likely to be cut in half over the next decade. ***PW***

WHARTON transportation report

Transportation prices staying down



Freight cost outlook by mode

(Percent increase over previous year)

Source: Wharton Econometric Forecasts

There's good news on the transportation front. Current and projected freight rate increases are being revised downward.

As recently as three months ago, Wharton Econometrics (the consulting firm which provides *PW* readers with rate projections every quarter) was estimating that the overall 1987 and 1988 advances would be 4.0% and 4.2%, respectively (see *PW*, 12/87, page 44). But just-revised data suggest a significant reduction—the new figures point to only 2.9% increases for both years.

Contributing to the moderation are 1) relatively small boosts in labor costs, 2) still low, although increasing energy prices, and 3) overcapacity in some sectors. Another factor: healthy intra- and intermodal competition.

Over the ensuing years, however, price pressures should begin to build a bit. Specifically, wage increases are expected to accelerate and overcapacity problems should abate as demand continues to rise. Despite all this, boosts will remain in the tolerable range—4.8% next year and 5.6% in 1990.

As usual, these averages obscure individual modal differences—with the more specific trends expected to shape up like this:

- **Trucking**: Growth exceeded the general industrial production advance last year—thanks to inroads made at the expense of other modes and a relatively sharp gain in nonmanufacturing shipments. But despite good demand gains, prices rose only 2.9%.

As for the new year, lower oil tags over the next few quarters will certainly help to keep a lid on costs. But labor pressures, due to a shortage of drivers, will work in the opposite direction. All in all, price increases are expected to average near 3.2% this year.

- **Railroads**: Good gains in 1987 can be traced to increased shipments of steel and the raw materials used in their production. But this is an area that will likely see lower volumes in 1988. Auto shipments are also likely to drop this year, while coal and grain could see some small gains.

The critical problem for rail this year will be continued tough competition from trucking.

The one advantage rail gets from trucking is the intermodal link. Not surprising, piggyback traffic has consistently been the healthiest volume segment in recent years.

Both the competition and the intermodal links, however, are good news for shippers—with an added dividend coming from the growing use of doublestack LTL carriage. In any event, prices are forecast to grow at only a 2.5% pace this year—actually under 1987's estimated 3.1% advance. Some moderate acceleration—to 4.7%—is forecast for 1989.

- **Air cargo**: Traffic was up dramatically (nearly 9%) last year according to the Air Transport Association. Freight advanced 10.2%, with a smaller 4.5% boost recorded for mail. More important, demand should continue to improve.

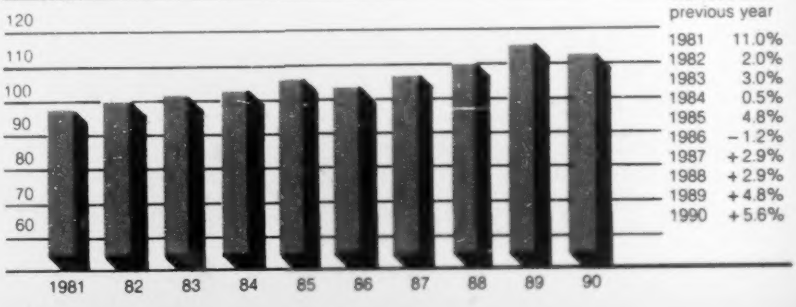
Air rate increases are also likely to be high this year compared to the other modes—jumping 4.3% (the same rate increase as last year).

- **Water freight**: The industry appears to have leveled off after a 10-year decline that claimed a large number of operators as victims. The survivors are much stronger than before the shakeout—and both grain and chemical traffic has begun to pick up.

However, the industry's rate structure will continue to be held down by the huge, albeit shrinking, surplus of barges that could still take years to work off through scrappage. Thus waterfreight rates will continue to show the smallest gains of all transportation services. This year rates are targeted to rise only 2.2%—even less than in 1987. Next year's advances will be held to 4.3%. ***PW***

PurchasingWorld freight rate index

(1982 = 100)



Increase over previous year	
1981	11.0%
1982	2.0%
1983	3.0%
1984	0.5%
1985	4.8%
1986	−1.2%
1987	+2.9%
1988	+2.9%
1989	+4.8%
1990	+5.6%

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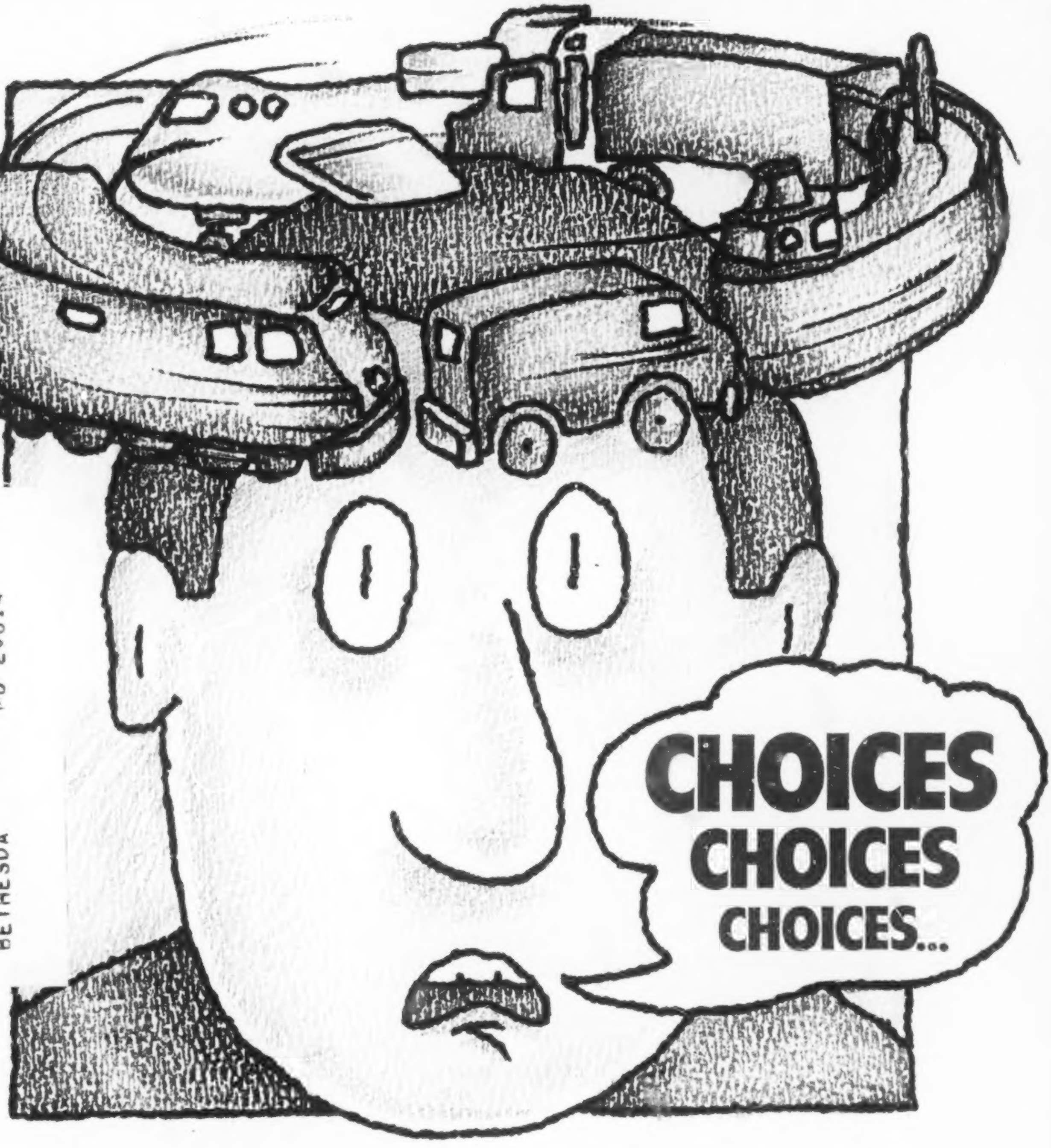

1988 Crystal Ball contest winners

Managing the vendor sales rep

Making Electronic Data Interchange work

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PurchasingWorld

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Material and labor costs help to keep lid on price increases

Last year's big raw material price runup seems to be running out of steam—good news for the overall near-term price outlook.

Lest there be any doubt, *PW's* Price Barometer—a time-tested indicator of grassroot material cost pressures—has been edging lower since last fall. Over the past four months it has slipped nearly 3%, in contrast to the previous seven months when averages jumped by nearly 20%. Equally significant, the BLS "crude non-food material" index has dropped by more than 3% in the last few months.

The change is most apparent in nonferrous metals. Copper is already heading down after reaching a high of near $1.50/lb in December. Lead and zinc have also peaked. And while aluminum is still very high, the prognosis is for some slippage by summer or early fall.

Construction materials, including lumber, should also take a breather as housing starts slow. Energy tags should also soften, impacting petrochemicals and plastics.

Basic material input costs aren't the only things keeping a lid on overall price increases these days. New figures show unit labor costs (wage rates adjusted for productivity) in the non-farm sector rising only 1.9% in 1987—less than the 3.2% and 2.2% posted for 1985 and 1986.

It would be unrealistic to expect a repeat of last year's small gain, but any unit labor cost acceleration in 1988 is likely to be quite modest. On the productivity side, for example, a 1-1.5% gain is expected for 1988. And for manufacturing, the gain is likely to be even more impressive.

No problems are anticipated from the other part of the unit labor cost equation—namely wage rates. And that holds even if unemployment rates dip below the current 6% rate. Many economists used to believe that the "natural" jobless rate was slightly over 6% and that if it fell below that level, pressures for inflationary boosts would build. Recently, however, estimates of the minimum point have slipped to around 5%. Look for 1988 wage boosts to be modest—about 4%.

This absence of labor and material cost pressures can't be underestimated. That's why price forecasts for 1988 and 1989 are so optimistic. The Presidents Council of Economic Advisors puts the GNP price deflator at only 3.9% this year and 3.7% for 1989.

DRI price projections are equally engouraging. The consulting firm's estimate calls for a 3.5% GNP increase on a year-to-year basis. Its more narrow industrial producer price forecasts call for increases of 3.9%, 5.0%, and 4.7% for 1988, 1989, and 1990.

Price forecasts to 1990

Price increases may be picking up a bit, but the acceleration is likely to be quite modest—with a 3.9% overall boost in industrial tags anticipated for the current year.

That's only a little more than one percentage point over 1987's 2.6% increase. Even in 1989 and 1990, boosts aren't expected to top the 5% mark.

At least that's how analysts at DRI see it. Preparing their regular quarterly report for *PW* readers, they attribute much of the moderation to relatively low wage cost boosts: 4.2% this year, not all that much higher than last year's 3.6% advance.

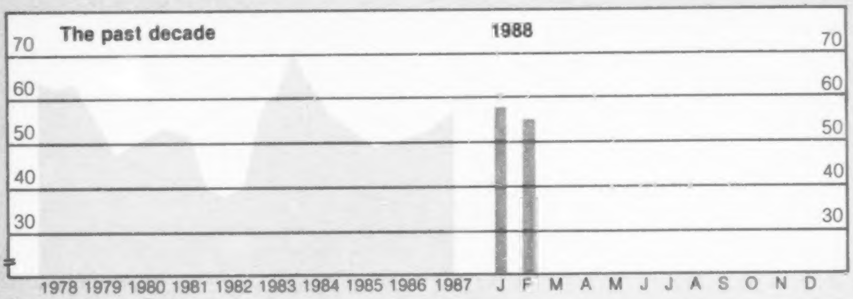
But price averages tell only part of the story. There could be significant product-by-product variations—with even a few declines possible in the copper area (see table below).

Product line	1988	1989	1990
Raw materials—energy			
Supplies for manufacturing	3.0	3.7	4.2
Finished lubricants	−0.3	4.9	5.3
Corrugated boxes	10.2	2.9	3.8
Metals			
Steel mill products	6.7	4.2	5.0
Steel plates, carbon	19.7	1.5	4.5
Foundry & forge shop products	3.5	6.4	5.2
Coper scrap	68.3	−43.3	−9.9
Nonferrous mill shapes	22.7	−4.5	3.8
Titanium sponge	0.0	1.1	3.2
Sheet metal products	5.6	1.0	2.7
Components			
Rubber & plastic products	5.0	3.9	3.4
Laminated plastic sheets	2.3	1.8	2.6
Industrial controls	1.2	3.8	4.8
Transistors	1.2	1.5	2.1
Machine shop products	1.6	4.7	7.1
Construction			
Calcium oxide	3.3	1.5	2.1
Paint materials	6.5	6.2	5.3
Concrete rebars	4.2	5.2	5.2
Aluminum siding	10.0	2.7	1.8
Gypsum products	−6.7	5.5	4.8
Machinery			
Capital equipment (mfg.)	2.3	4.3	4.8
Capital equipment (non-mfg.)	2.3	4.0	4.1
Trucks over 10,000 lb	−2.0	4.8	5.5
Furnaces (forced air, gas)	1.7	6.4	6.1
Fans & blowers	0.7	4.9	5.8

Source: Data Resources, Inc., Cost Forecasting Services

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Confidence and momentum are building the economy

The first quarter of 1988 has turned out to be better than expected. While some deceleration is likely, there's little on the horizon to suggest near-term decline in overall business activity.

As Robert J. Bretz, chairman of the NAPM Business Survey Committee puts it, "while the pace of growth is slowing, the economy is still managing to register respectable increases." To back this up he points to the NAPM Business Barometer (chart above) which, while off from the previous month, is still well above the neutral 50 mark.

One reason for the continuing positive readings here: A rise in exports. Some 33% of surveyed NAPM buyers report an increase in export orders over the latest 30-day period—on top of the gains noted during recent months.

Further confirmation of the export pickup can be seen in figures showing a declining trade deficit. In the first quarter, for example, net real imports declined by more than 10% —enough to provide a lot of new business for domestic factories.

Still another sign of factory strength is the recent rise in industrial distributor sales. This key indicator of future production activity has been slowly trending up—as factory managers get ready for modest gains in the months immediately ahead.

Also on the optimistic side is the improvement in capital equipment orders—especially machine tools. This reflects the rise in factory operating rates which has necessitated some upgrading of expansion plans.

Consumers, too, are behaving better than expected following the recent stock market tumble. Indeed, the latest Conference Board consumer confidence index shows consumers increasingly upbeat over the past three months. This yardstick has regained virtually all of the ground lost following the October crash.

One particularly good sign: A big jump in plans to buy a new car over the next six months—to 4.5% of surveyed families, and within shooting distance of the 4.8% peak of last summer.

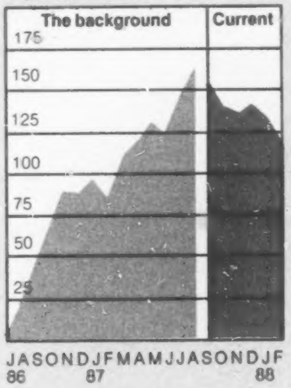
This, in turn, could be why Detroit is raising its car production sights. Current plans call for making over 1.9 million units in the second quarter—up from 1.7 million during the first three months of the year.

Other areas are looking up, too. Plans to buy a major appliance over the next six months are up sharply—with more than one out of three consumers contemplating such a purchase.

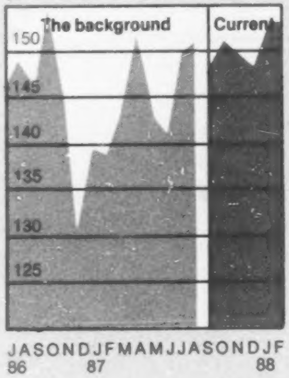
Why all the optimism here? Part is due to a low

Leading indicators

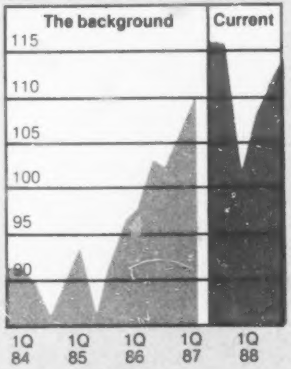
1. Net real imports
(Bil. of '82 dollars, seas. adj. annual rate)



2. Industrial distributor sales
(Index: 1977 = 100)



3. Consumer confidence
(Index: 1985 = 100)



(under 6%) jobless rate. And spendable incomes continue to rise. About a 6% gain is seen for 1988—enough to allow for a real increase even after a 3-4% boost in consumer prices.

Last but not least is the recent slight drop-off in interest rates. The prime rate averaged out near 8.5% during the first quarter—close to the 8.2% average for 1987. Other things being equal, this should make for increased purchases by businessmen as well as consumers.

That's not to say that GNP is ready to take off. Housing starts are down. And while auto sales are holding up, they will still probably fall short of 1987 totals. Finally, there's Uncle Sam's spending. True, the deficit is still very large. But it is edging lower, and to the extent it shrinks, it means that much less government money being pumped into the economy.

The best bet is for a 2-3% real GNP advance over the next few quarters—considerably under the big 4.5% fourth quarter 1987 jump but still respectable.

Supply lines stay smooth

Much of the slack in the U.S. economy is disappearing. At latest report, the average factory is operating at just over 82% of capacity—up 3% from 18 months ago.

Highest rates are in the paper, plastic resins, and textile areas which are up in the 95% range. And primary metal operations in the 90% area attest to scattered current tightness in copper, aluminum, and steel.

There's little to suggest a mushrooming supply problem. We are still 3% under the 85% level that historically has signaled shortages.

There has also been some increase in new plant and equipment spending over the past few months—although it will be some time before this translates into meaningful additions to onstream capacity.

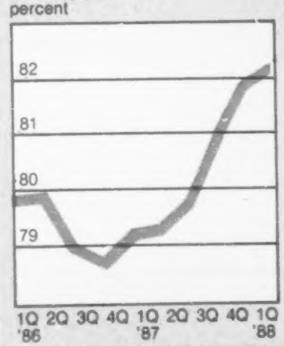
The increases in industrial production that pushed operating rates up are beginning to slow down now. Only a 2-3% advance in output is now projected for the next 12 months—less than half the 6% increase racked up over the past year.

Finally, this 2-3% projected production increase is in line with estimated capacity increases over the same time span. The implication is that operating rates will stay where they are—at least as far as overall averages are concerned.

This is not to say that certain items won't remain on the tight side. On the other hand, several areas could begin to loosen up toward the end of this year—notably metals and plastic resins. The latter should be aided by a 5% increase in capacity this year.

Operating rates inch up

The big picture
percent



Industry-by-industry
(latest operating rates %)

Primary metals	89.6
Fabricated metal products	80.8
Non-elect. machinery	76.7
Elect. machinery	76.6
Automotive	76.7
Instruments	78.4
Textile mill prods	94.1
Paper & prods	96.5
Chemicals & prods	85.9
Petroleum prods	87.7
Rubber & plastics	88.5
Utilities	81.6

Source: Bureau of Labor Statistics, PW estimates

Fax usage quickly builds equipment market

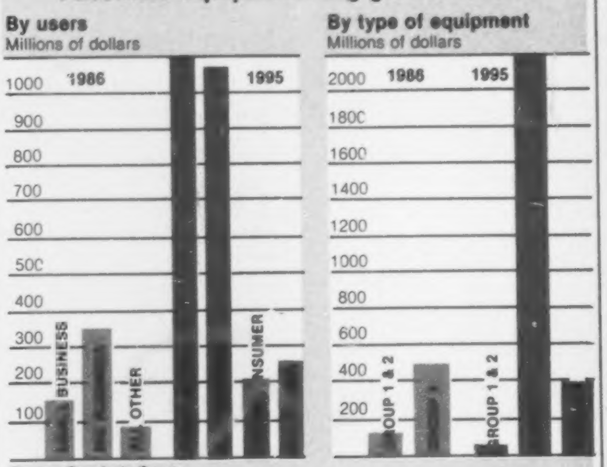
Facsimile growth is only beginning. Current projections show continued strong gains (about 18% annually) through the mid-1990s.

That's how analysts at the Freedonia Group see the market. The Cleveland-based research outfit predicts that sales (only around $600 million in 1986) will balloon to $1.34 billion in 1991 and to near $2.7 billion by 1995.

Most of the gains will be in Group 3 machines—those that use digital transmission and are capable of forwarding documents with up to twice the resolution of earlier machines—all in 30 seconds or less. As the accompanying chart suggests, $2.2 billion (83%) of total 1995 sales will be for this type of fax.

But gaining popularity (from near-zero sales at present) will be Group 4 machines which are expected to comprise 7.5% of the market in 1991 and 15% by 1995. These more versatile machines (expected to sell for an equal of $3,333 in 1991 and $2,860 in 1995) are able to interface with computer

Facsimile equipment: Big growth ahead



Source: Freedonia Group

systems—and add a number of new telecommunications applications.

From an end-user perspective, small businesses will join their bigger counterparts in jumping on the fax bandwagon. Each segment will account for slightly more than 40% of the market, with small business use growing the fastest—about 25% a year.

Home use—now near zero—is also scheduled for big growth. As costs come down (Group 3 machines are expected to sell for an average of $2,000 in 1991 and only $1,770 in 1995), more and more families will be able to shop, bank, and send messages via fax—making for a market of near $205 million by the mid-90s.

This month's breakdown

Index: 1982 = 100

	Latest level (February)	% change from: Month ago	Year ago
Bearings	110.2	0.6	2.3
Bolts, nuts, etc.	105.1	0.4	2.1
Chemicals, inorganic	97.2	1.1	3.0
Chemicals, organic	98.1	−1.6	7.3
Concrete products	109.6	0.0	0.2
Corrugated cartons	105.8	0.0	NA
Cutting tools, small	107.1	0.5	0.9
Electric lamps (bulbs)	122.1	0.6	1.2
Electronic components	115.8	0.0	0.3
Fans and blowers	112.5	−0.5	1.7
Foundry and forge products	107.4	0.3	2.2
Fuel oil (residual)	44.1	−3.7	−16.9
Furniture, commercial	121.3	0.1	3.6
Gasoline	53.8	0.0	−2.4
Glass, flat	108.8	0.5	3.0
Glass containers	112.5	−0.1	−0.8
Gypsum products	115.1	−4.5	−12.7
Hand tools	118.7	0.3	3.4
Hand tools, power driven	110.5	−0.1	0.9
Industrial furnaces	118.8	0.7	4.2
Integrating and measuring instruments	116.1	0.3	3.1
Internal combustion engines	110.7	0.4	1.4
Lubricating oil	102.9	0.8	2.7
Lumber millwork	120.2	0.5	4.5
Material handling equipment	106.0	0.1	1.9
Metal containers	108.3	−0.2	−1.5
Metal mill shapes (nonferrous)	120.9	−1.1	22.7
Metal tanks	100.2	0.3	4.8
Motors and generators	119.4	1.2	4.3
Motor trucks	122.7	0.2	0.7
Office and store equipment	105.8	−0.1	2.9
Paperboard	122.8	0.1	6.3
Paper boxes and shipping containers	119.5	0.0	5.8
Paper office supplies	111.4	0.7	2.8
Paint	109.8	0.3	2.4
Plastic resins	122.8	2.5	19.9
Precision measuring tools	119.0	1.9	5.8
Pumps and compressors	106.5	0.3	1.5
Refractories	112.5	0.0	2.4
Rubber belts and belting	102.8	1.4	−1.7
Scales and balances	104.8	0.0	1.4
Steel products	107.7	0.4	6.7
Switchgear	111.2	0.6	2.1
Textiles, synthetic fibers	94.6	1.8	3.5
Textiles, gray fabrics	112.5	0.9	8.5
Tires and tubes	93.5	0.6	2.5
Transformers and power regulators	107.8	0.9	0.9
Welding equipment	114.5	1.1	3.7
Wire and cable	130.1	−2.5	28.6

CURRENT PRICES

Prices creep upward—but barely

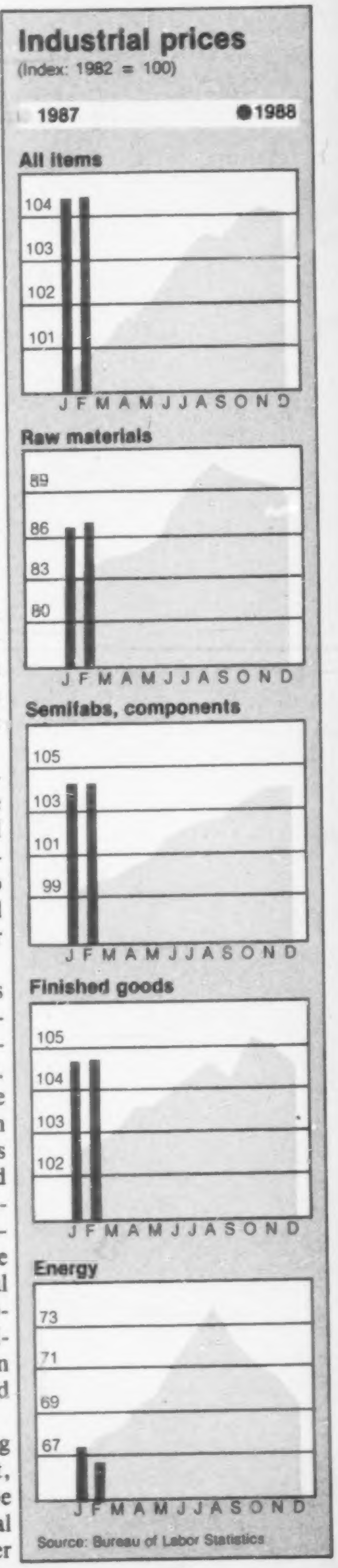
Industrial prices continue to behave better than previously expected—with overall quotes advancing only 0.1% over the past 30-day period—or less than 1.5% at annual rate.

Declining energy prices contributed to the surprisingly small average advance. But it is also true that other areas have been taking a breather lately, including component parts where declines in motor vehicle parts and abrasive products offset increases in bearings and electric motors.

A somewhat mixed picture is also noted in the metals sphere. While steel mill products and aluminum have continued to edge up, both lead and copper are now well under their earlier highs.

A similar standoff is noted in construction materials as the housing slowdown impacts on demand. Falloffs last month were noted in construction sand, cement, nonferrous wire and cable, softwood lumber, gypsum products and asphalt roofing—enough to counterbalance boosts in structural metal products, plastic plumbing products, air conditioning and refrigeration equipment, millwork and hardwood.

If one best performing area has to be singled out, it would again have to be energy, with only coal moving up in price over

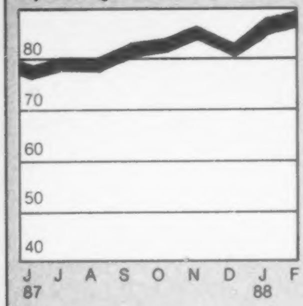

Industrial prices

(Index: 1982 = 100)

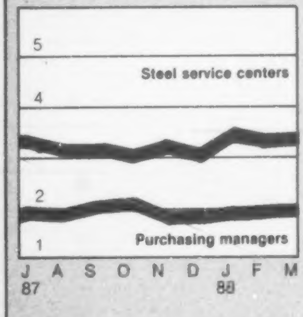
Source: Bureau of Labor Statistics

Steel

Operating rates

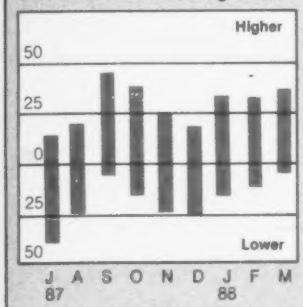


Inventories
(Months supply on hand)

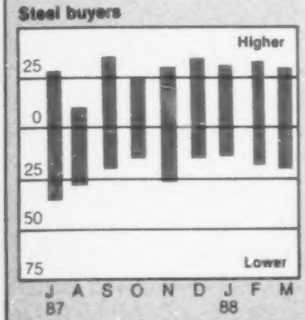


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyers



Import prices
(Compared to domestic)

Steel buyers

ABOVE 60%
SAME 23%
SLIGHTLY BELOW 17%
SUBSTANTIALLY BELOW 0%

Service centers (carbon)

ABOVE 19%
SAME 81%
5-10% BELOW 0%
10-20% BELOW 0%
OVER 20% BELOW 0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

the past month. Contrast this to new declines in crude oil, gasoline, home heating oil, natural gas, diesel fuel, residual fuel, liquid petroleum gas and electric power—which together have helped push fuel and power averages down nearly 10% since last summer.

The chemical and allied product sector has quieted down a bit. True, plastic resins (now in relatively tight supply) continue to move and are now a hefty 20% ahead of year-ago levels. But this is at least partially offset by recent softness in organic chemicals—probably a reflection of lower petrochemical feedstock costs.

Also on the reassuring side: the absence of any big runup in capital goods despite increased demand and higher import quotes. All in all, the increases here over each of the past three months have only been in the order of 0.2%—or about 2.5% at annual rate.

Indeed, paper is about the only major area that has continued to advance at a relatively high (6%) rate.

STEEL SCENE

Demand for steel seen growing at least thru the spring quarter

You can figure on the now year-old steel buying boom spilling over thru the spring months. With this should come growing concern about availability (from all sources) and price.

About the only sign of a possible slowdown over the next few quarters is an increase in inventory accumulation by buyers and service centers. But, at this point the increase in stocks doesn't seem to be interfering with buying plans.

The reasons for that aren't too hard to find. For one, consumption is holding up quite well. If there's any doubt on this score take a look at durable goods industrial production. At latest report, this time-tested proxy for steel demand was running a solid 6% ahead of year-earlier levels.

But chewup is only one of several factors working to keep the steel market strong. Equally significant are continuing fears of shortages. The latest NAPM Steel Buyers' Survey, for example, finds that less than one in ten buyers surveyed feel steel procurement will be problem free over the spring and summer months.

Equally noteworthy here is that concern is expressed about each of the ten steel categories monitored in the monthly survey. Biggest worries are centered on plate, cold-rolled steel, and stainless.

Still another demand prodder could be expectations of additional price increases. In responding to the latest Steel Service Center Institute (SSCI) survey, some 89% said metal replacement costs would move higher over the next six months.

About the only positive sign on the price front has been a slight deceleration in the number of service centers who expect these near-term price increases to top the 5% mark. In the latest report, only 21% were putting future replacement cost boosts above 5%—compared to the 27-39% readings of the previous four months.

On a somewhat less optimistic note is few respondents look for imports to help keep a lid on prices. Indeed, virtually all distributors are now saying that both carbon and stainless steel import tags are at or above comparable domestic levels.

Buyers are pretty much agreed on this too. True, 17% still say there are some import price breaks. But, they are all dubbed "slight." Moreover, this 17% figure is well under the comparable 39% figure of just one year ago.

To sum up, a combination of factors is now working to keep steel demand high. And this demand could go even higher. Thus some 30% of queried buyers say they intend to increase their receipts of steel over the next three months—considerably more than the 20% who feel some reduction in purchases may be in order.

This kind of bullish demand scenario is suggested by service centers. Specifically 37% forecast an increase in their incoming orders over the next three months, versus only 5% who look for reduced bookings.

All of the above is not to say that there may not be some slowdown towards year end as consumption begins to flatten out and inventories edge higher. In fact, as suggested above, there are already signs of tonnages beginning to rise a bit. The latest buyer survey finds that steel holdings as of now are in the 2.0 month range—up from the 1.8 month reading of two months earlier.

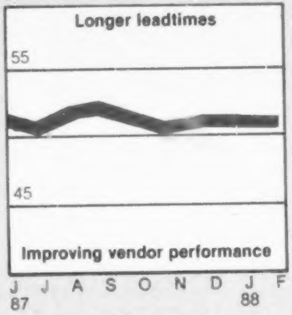
And distributors responding to the latest SSCI survey tell pretty much the same story. Their current 3.36 month supply marks the third consecutive monthly advance there—putting totals well above the just-under-three-months supply of late last year.

So far the service center increases in storeroom tonnages have been spotty—generally occurring in the tubular and structural areas according to SSCI president Andrew G. Sharkey.

Monthly procurement status report

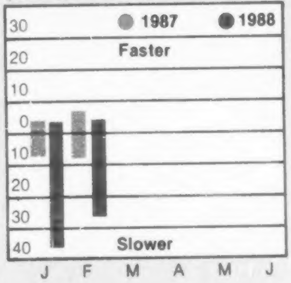
Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



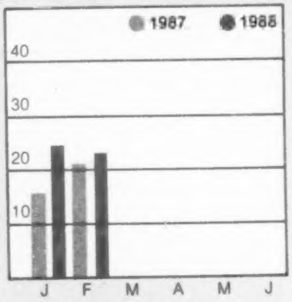
Delivery performance

(Percent reporting deliveries)



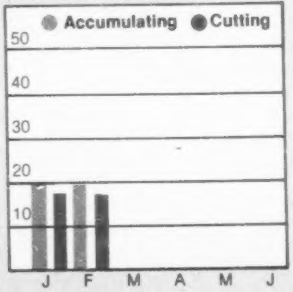
Forward commitments

(% committing 90 days or more in advance)



Inventory strategy

(Percent of respondents)



Source: NAPM

PROCUREMENT STATUS

Leadtimes lengthen on more products

Vendor performance still leaves a lot to be desired these days—witness the continuing upward movement in *PW's* leadtime index and the significant number of PMs reporting delivery delays.

On the latter score, more than a quarter of surveyed NAPM buyers were hit with slower deliveries this past month—far outweighing the 4% who were lucky enough to experience some speedup. But the report does add that "although members continue to be plagued with shortages in certain commodities, it appears that these shortages are fewer and the slowdown in deliveries is leveling off."

But this is small consolation to purchasing executives who are buying from the long list of commodities said to be in short supply: Aluminum, copper, steel (including hot- and cold-rolled sheets, plates, and stainless), bearings, caustic soda, acetic acid, ethylene and ethylene derivatives, plastic resin, phenol, styrene, methanol, methylethyleketone, and titanium dioxide.

A few further words are also in order on our leadtime index. We are now in the process of reviewing this exclusive *PW* yardstick—to make the report more meaningful and useful.

Our goals are to (1) expand geographical representation to more cities (2) tap a broader base of respondents, and (3) expand coverage to an area of increasing importance to industrial buyers—namely office equipment.

PW readers will soon be receiving detailed leadtime reports on such key product lines as copiers, PC workstations, fax machines, pre-printed forms, electronic typewriters, furniture, printers, and telecommunications equipment.

The target date for completion of this major revision: Sometime this spring—perhaps as early as next month.

Coming next month...

How industrial distribution can assist MRO buyers—ways to locate hard-to-find products and get them delivered now!

What's new in packaging, materials and technology. Purchasing's involvement in both in-bound and out-bound packaging selection.

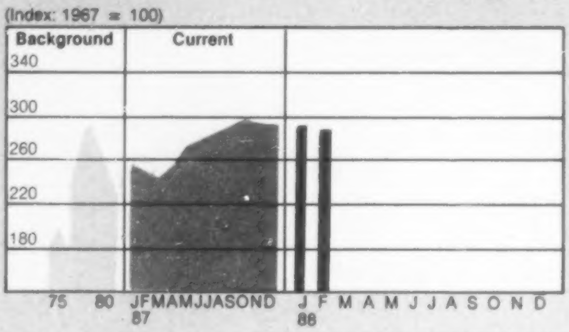
Using purchasing to procure professional services. How one firm involves the purchasing department in third-party contracts.

BUSINESS DATATRAK

Raw material price barometer

Latest month 289.3
Month before 292.5
Year ago 247.2

(Index: 1967 = 100)



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	15.70
Steel, bars, Pitts., cwt.	16.50	16.50	15.70
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	19.45
Steel, plates, Pitts., cwt.	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	28.15	28.15	26.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	1.025	.920	625
Antimony, N.Y., dealer, lb.	1.09	1.14	1.08
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	1.66	1.72	1.31
Brass, yellow, [sheet], lb.	1.61	1.67	1.26
Cadmium, N.Y., dealer, lb.	2.00	3.50	0.95
Copper, electrolytic, wire bars, refd., lb.	1.02	1.08	.67
Copper sheet, over 24 in., lb.	1.74	1.81	1.40
Lead, common, N.Y., lb.	.340	.370	.260
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	350.00	360.00	235.00
Molybdenum, oxide, dealer, lb.	3.30	3.15	3.05
Nickel, cathode, dealer, lb.	4.65	3.80	1.75
Platinum, dealer, oz.	480.00	445.00	525.00
Silver, N.Y., oz.	6.29	6.43	5.51
Tin, N.Y., dealer, lb.	3.18	3.15	3.13
Zinc, Prime West, East St. Louis, lb.	.47	.46	.38
Zinc, die casting alloy, No. 3, lb.	.525	.515	.445
PAPER			
Uncoated book #3 offset, ton	890.00	890.00	860.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	17.09	17.07	16.29
Grocery sacks, ton	435.00	435.00	390.00
Solid bleached paperboard, ton	650.00	650.00	620.00
Kraft linerboard, 42 lb., unbleached, ton	410.00	380.00	350.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.278	.276	.230
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.22	1.24	1.08
Cotton middling, 1", N.Y., lb.	.586	.564	.540
Printcloth, 48", 80x80, N.Y., spot. yd.	.535	.535	N.A
Army duck, 37", 13 oz., yd.	1.510	1.510	1.405
Blended printcloth, 64", 78x54, yd.	.67	.72	.83
20s combed yarns	2.04	2.00	1.77
Wool 64s, Staple, lb.	4.25	3.87	2.12
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	100.00	75.00	80.00
Benzene, petroleum, tanks, Houston, gal.	1.10	0.95	1.58
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.685	.685	.910
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.53	.49	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.32	.32	.27
Polyethylene resin, low density liner film grade (market place), lb.	.445	.425	.285
Polypropylene, homopolymer grade (market price), lb.	.530	.495	.350
Polystyrene, general purpose grade (market price), lb.	.565	.550	.390
Polyvinyl chloride, pipe grade (market price), lb.	.410	.390	.315
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.46	.46	.33
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	152.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.80	.80	.77
Xylene tanks, gal.	.760	.760	.795
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	323.80	320.05	327.30
Lumber 2x2 pine, mbf, cl	326.00	322.55	322.05
Plywood, plyform, ¾", msf, cl	568.05	568.90	566.45
Plywood, ⅝", msf, cl	400.25	397.85	381.90
Cement, bulk, ton, tl	64.07	64.07	63.25
Sand, ton, cl	7.32	7.31	6.82
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.94	48.84	48.15
Crushed stone, 1½", ton, cl	8.37	8.34	8.08
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.93	0.92	0.84
Gypsum sheathing, ½"x1"x8", msf, tl	231.21	225.54	207.84
Brick, common, per thousand, tl	204.62	201.12	188.10
Asphalt paving, AC-20	137.93	139.05	124.66
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.57	7.58	7.37
FUELS			
Crude oil (W. Tex Int Cush), bbl.	16.00	17.15	18.40
Diesel (reseller rack, Chi), gal.	.4475	.4660	N.A.
Fuel oil No. 2 (N.Y.), gal.	.4600	.4825	.5035
Fuel oil No. 2 (Gulf spot), gal.	.4225	.4475	N.A.
Fuel oil No. 6 (N.Y.) contract cargo, bbl.	16.75	18.25	N.A.
Gasoline (reg lded NY), gal.	.4525	.4715	.5300
Gasoline (reg unlded NY), gal.	.4400	.4575	.5125
Kerosene (reseller rack, Chi), gal.	.4930	.5140	N.A.
Propane (Mt. Belviu, Tex), gal.	.2400	.2375	.2325
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	121.00	124.00	80.00
Steel, No. 1 hvy., dlvd., Chi., ton	117.00	117.00	73.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.920	.880	.580
Copper, No. 2, East, wholesale buy, dlvd., lb.	.810	.785	.500
Brass, red, East, wholesale buy, dlvd., lb.	.880	.840	.540
Brass, yellow, East, wholesale buy, dlvd., lb.	.415	.415	.330
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.625	.575	.385
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.710	.660	.420
Zinc, old, East, wholesale buy, dlvd., lb.	.20	.20	.20
Lead, clean solids, East, wholesale buy, dlvd., lb.	.210	.240	.155
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	25.00	25.00
Paper, old corrug. box, dlr., N.Y., ton	10.00	10.00	15.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.12
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.30	.23	.12

[Sources: Metals Week, American Metal Market, Engineering News-Record (20-city averages), Wall Street Journal, Journal of Commerce, Chemical Marketing Reporter.]

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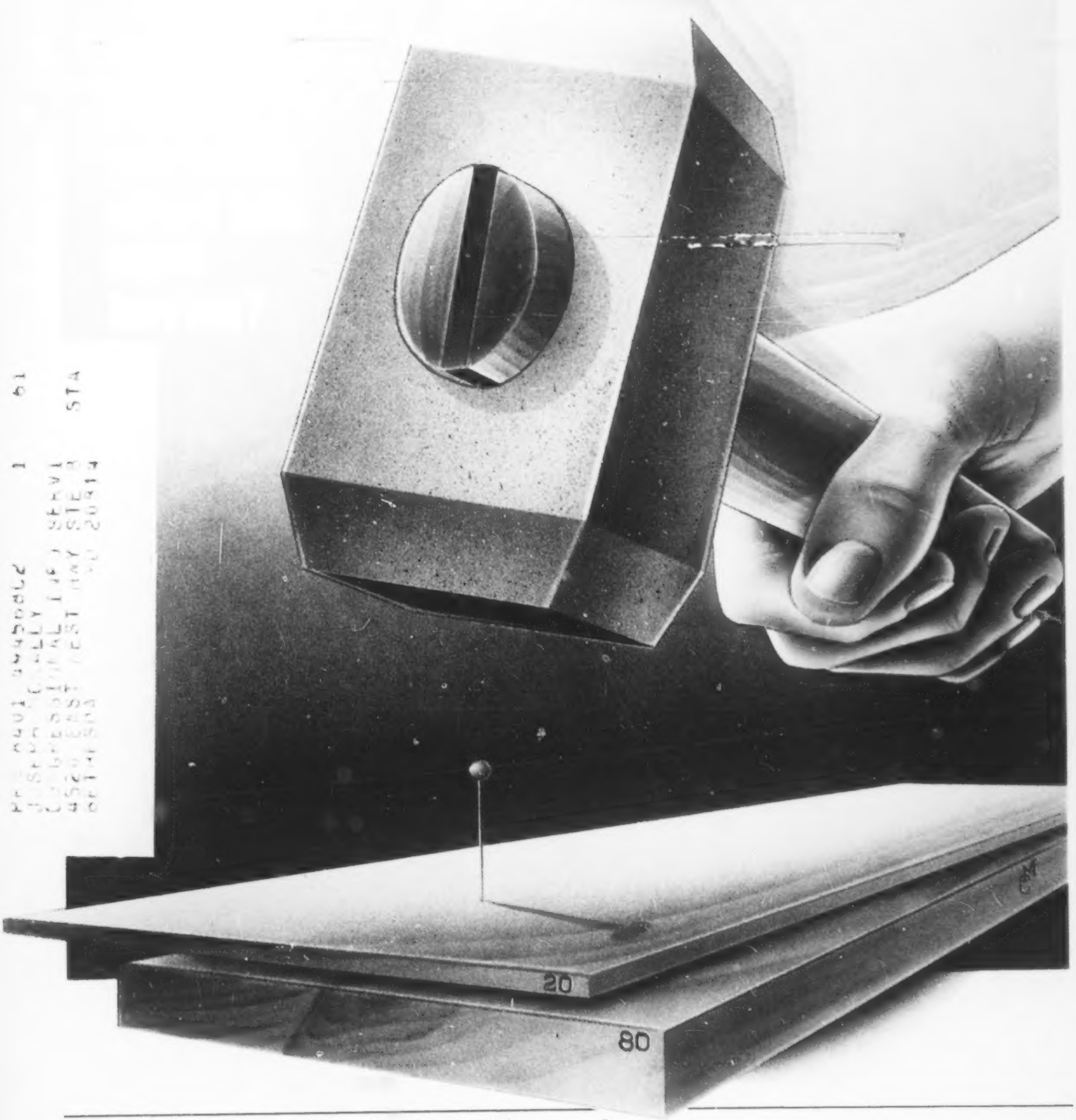

What the buyer seller/partnership needs

Benefits and risks of self-help gas

How to get MRO electronics JIT

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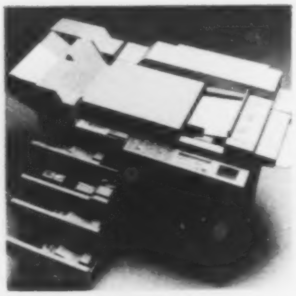

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Columnist Lou De Rose gives 10 essential elements to a true partnership effort between vendors and purchasers.

81 **Does the buyer have the warranty?**
There are three little words—merchantability, and as is—which are extremely important in determining who has the warranty.

PurchasingWorld

Automatic/executive office door closer

Ever want to close, or open, your office door without the time and energy it takes to leave your desk, go to the door and close it, and return to your desk? A device originally designed for penal institutions to close jail doors electronically has been redesigned for business use by the Executive Door Closer Co.

When Occidental Petroleum had their penthouse offices refurbished, Dr. Armand Hammer had all of his executive offices equipped with the door closer, which company officials promote as being, "The touch of class." By simply pushing a button on their desk, Occidental executives can open or close their office doors without any wasted time or motion.

The door closer comes in two models, at $335 or $425 each including shipping. Additional 10 and 15% discounts are available on orders of three each or more. **Circle 91**

Tennant video, and book, aim at quality programs

A videotape, *Quest for Quality* is available from Tennant Co., to help businesses implement a quality improvement process. Tennant's eight-year experience in quality improvements has resulted in a company savings of over $5.6 million. In 1986, the company's quality program was ranked Number One for all manufacturers by author Tom Peters (*In Search of Excellence).*

Quest for Quality, also available in a book format, provides step-by-step advice based on proven methods, including those of Philip Crosby, author and consultant on quality. A foreword by Tom Peters is also included in the video, as well as in the handbook, that provides further details on establishing a quality program. **Circle 93**

Advanced senior management procurement program begins

An intensive program in senior procurement management, "Global Purchasing Strategies" is being offered for the first time by Babson College's School of Executive Education, June 26-July 1, in conjunction with Purchasing Management Association of Boston. This five-day residential program, to be held at Babson's new Executive Education Center, is designed for executives responsible for planning and managing the international dimensions of their company's activities in purchasing and sourcing. Faculty include both internationally-experienced professors and executives from companies considered trend-setters in international procurement. **Circle 92**

Are you entitled to a 99% refund on import duties?

If your firm imports, manufactures and exports, or imports, stores and exports, then your import duties may be refundable. Duty Drawback Service, Inc., has available a booklet that details the criteria which may qualify your firm for a refund (drawback) on import duties. Basically, the booklet explains, if you import directly, through a supplier, or through a chain of suppliers, and you export manufactured products, store and resell imports, or return/reject imports, you may be entitled to a 99% duty drawback (refund).

Duty Drawback Services, licensed customs brokers and drawback specialists since 1956, can determine whether you're a candidate for such refunds. Uncovering refunds is their only business. For more information **Circle 89**

PurchasingWorld

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Robert S. Reichard, executive editor

Price pressure eases after early spurt

Price pressures seem to be simmering down a bit after a somewhat disturbing early 1988 spurt.

In any event, fewer purchasing managers responding to the latest NAPM Business Survey committee survey report being socked with new boosts (52% at latest report *versus* 63% a month earlier).

There is some indication that the big runup in basic commodities—most notably nonferrous metals and plastics—may be about to slow down. Indeed, there is even the possibility for moderate corrections in some of these sectors by summer or fall—as 1) speculative fevers die down, 2) additional production capacity slowly comes on line, and 3) industrial production gains begin to decelerate after midyear.

On the metal front, Wharton Econometric Forecasting Associates (the WEFA Group) sees the nonferrous metal category as a whole rising only 1-2% at annual rate for the rest of 1988—a far cry from the huge double-digit rate increases of the past few quarters.

The consulting firm's forecast for all primary stage (crude) materials is equally encouraging. The increase here for all of 1988 is put at only 1.2%—far under the 6.9% figure of last year.

Not everything will be decelerating. Thus while basic materials should be taking a breather, some modest speedup is predicted for more highly fabricated lines. This is virtually inevitable—given the need to pass through recent raw material increases.

Machinery and equipment, meantime, will also be prodded by relatively strong demand from both domestic and export sources. Even so, increases here will remain quite moderate—with averages advancing at perhaps a 3-4% rate—not that much above the 1-2% pace of the past few quarters.

There are some good reasons for this optimistic forecast. For one, demand is not likely to grow as fast as in recent quarters. Right now, for example, all signs point to about a 3-4% increase in industrial output at annual rate through year-end—well under the 7-8% rate of the last six months of 1987.

The cost side of the price equation also doesn't look all that bad in light of continuing wage restraint. Unit labor costs may rise a percentage point or so above last year's levels. But that would still leave this critical price determinant in the 3-4% range this year—a level consistent with only modest cost-push pressures.

Still another reassuring factor is the slowdown of the decline in the value of the dollar which, other things being equal, should begin to halt the rise in import prices.

The Fed, too, should also help reassure those who continue to worry about a new inflationary spiral. The small price acceleration of recent months has already prompted money managers to slow down on monetary growth.

Chemical price projections

Figure on chemical price averages advancing faster than the general price level—not only for the next few years but into the 1990s as well.

That's what analysts at Probe Economics are telling their clients these days. For a large number of product lines, the Mount Kisco, NY-based chemical research outfit projects annual increases of 6% or more—though there are a few exceptions (see table).

Why these kinds of increases? Rising raw material input costs are partly to blame. Thus oil, recently quoted in the mid-teens, could rise to near $47/barrel by the end of the century. And over the same time span, natural gas (wellhead basis) could jump from $1.70/mcf to near $6.35/mcf.

There's another reason for the bigger-than-average overall chemical price projection—relatively high plant operating rates. The chemical price boosts anticipated won't be enough, says Probe, to justify new domestic grass roots capacity. The majority of new expansion will take place overseas.

This will permit enough global capacity, but it would leave domestic availability short of needs. The inescapable conclusion is that there will be more dependence on imports—particularly in ethylene derivatives. On the other hand, a few chemicals such as propylene and benzene should be in relatively good domestic supply.

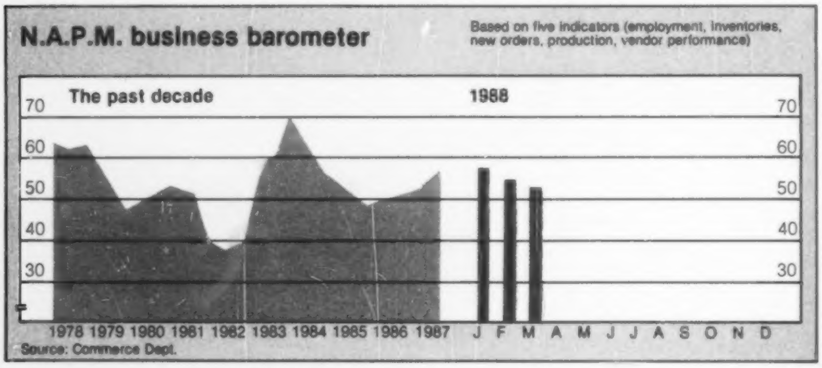
As for the specific price forecasts, the tightness in ethylene is likely to result in an average 6.8% increase over the 1986-1990 period. Derivatives such as polyethylene are expected to advance at an even heftier 10% annual rate. And polystyrene—dependent on fast-rising benzene and styrene—could be up by 12% a year.

Chemical Price Trends

A medium and long-term outlook

Basic Organics	**Average Annual Increase**	
	1986-90	1990-95
Ethylene	6.8	6.4
Propylene	9.2	8.5
Butadiene	0.8	5.0
Benzene	9.2	7.8
Styrene	7.7	5.1
Methanol	3.4	11.6
Thermoplastics		
LDPE	10.0	5.2
HDPE	10.0	4.8
Polypropylene	5.0	6.0
Polystyrene	7.0	4.7
Polyvinyl chloride	12.0	4.8
Inorganics & Fertilizers		
Ammonia	9.0	7.8
Chlorine	4.7	4.6
Caustic soda	9.1	5.6
Soda ash	1.0	3.7
Sulfuric acid	1.2	5.5
Urea	8.7	7.7

Source: Probe Economics


N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)

Source: Commerce Dept.

KEY ECONOMIC TRENDS

Expansion keeps on rollin'

The current business expansion—now well into its sixth year—shows no sign of faltering.

Much of the current strength can be traced to consumer buoyancy. Analysts had figured John Q. Public would pull in his horns following last October's stock market crash. But this has not proven to be the case.

Automobile sales, for example, have been holding up quite well. During 1Q 1988, domestically produced car sales have averaged above 7.5 million units annually—significantly above the 6.8-7.0 million pace predicted just a few months ago.

This, in turn, has prompted automakers to raise their production targets. The Big Three now plan to produce about 1,815,000 vehicles in the second quarter—up about 1% from a year ago and in contrast to earlier predictions for a small decline.

The current consumer firmness is not limited to the automotive sector. Sales of other durables—notably furniture and home electronics—have been quite good.

In any event, consumer confidence, as reported in recent buying attitude surveys, remains quite high. And the savings rate seems to have stabilized at a relatively low 4.8%. Contrast that to a few years back when as much as 6-7% of disposable income was being socked away (see chart).

But consumers aren't the only factor holding up the economy these days. Business confidence also remains high. A new survey shows that top executives are predicting more gains during the current quarter.

This, plus good profits and some capacity tightness, is resulting in a step-up in capital spending, clearly evident in the machine tool order pickup. Totals here at last report were running near $300 million month—nearly double the year-earlier pace.

And indications are that this upbeat news will continue. Right now it looks like the overall non-electrical machinery category (less volatile than machine tools viewed separately) will sport as much as a 7-8% increase in production this year—well above 1987's 5% advance.

Much of the gain will be due to exports, where a weak dollar has made U.S. equipment more competitive in most world markets. This same dollar impact, of course, is making importing these big-ticket machines less attractive, too.

Another reassuring note is in construction which seems to be performing better than expected.

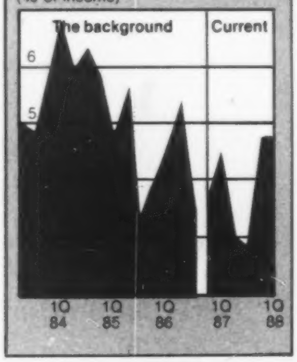
In any case, it appears that new housing activity is beginning to pick up.

Some solid evidence here: The latest 2-month climb in housing permits (see last chart), a leading indicator of housing starts. Another bullish sign in the building sector is the latest increase in construction contracts which are again running close to year-ago levels.

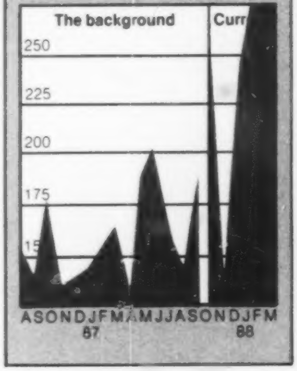
Add in a still basically trim inventory situation and it's easy to see why the NAPM Business Barome-

Leading indicators

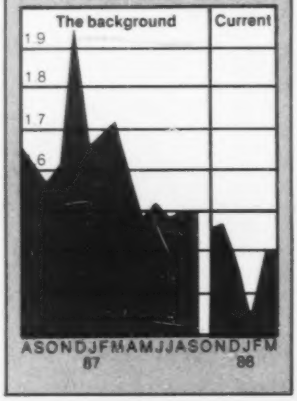
Savings rate
(% of income)



Machine tool orders
(mil. $)



Housing permits
(mil., seas. adj. annual rate)



ter—a time-tested indicator of activity a few months down the road—continues to run well above the neutral 50 mark.

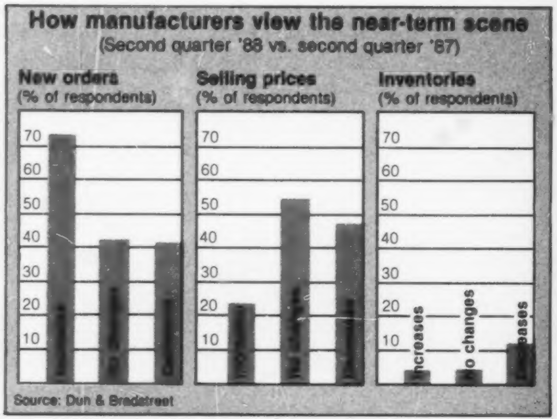
According to NAPM calculations, the year-to-date reading is close to 55. If this pace continues, says Robert Bretz, chairman of NAPM's Business Survey Committee, it should be enough to assure a 3%-plus real GNP advance for the year as a whole.

D&B economic forecast underscores optimism

Optimism is still the order of the day—most American businessmen see no slowdown in near-term business activity.

The accompanying chart, detailing the findings of a new Dun & Bradstreet survey of 1,500 top executives, tells the story. Note that in the manufacturing sector, 73% of the respondents expect an increase in April-June orders *vis a vis* a year earlier.

Three months ago when a similar question regarding the first quarter was posed, only 70% were betting on order gains. Also on the positive side as far as demand is concerned: an even more impressive 76% now expect sales to increase this quarter compared to year-earlier levels.


How manufacturers view the near-term scene
(Second quarter '88 vs. second quarter '87)

Source: Dun & Bradstreet

Inflation isn't expected to accelerate either. Some 42% expect their selling prices to be up *vis a vis* last spring (*versus* 54% who see no change and only 4% who anticipate a decline).

The hold-the-price-line scenario is also supported by the fact that profits are expected to continue rising, diminishing the likelihood of big cost pass-throughs. These profit expectations, says Joseph W. Duncan, D & B's corporate economist, are largely attributable to im-

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proved efficiency. Firms have improved their productivity and reduced unit costs in order to exploit sales opportunities both here and abroad.

Also worth noting: A slight increase in inventories is suggested by the new survey—41% of manufacturers plan on second quarter increases compared to the 38% reading of three months ago. D & B's Duncan attributes this to continuing growth in export orders.

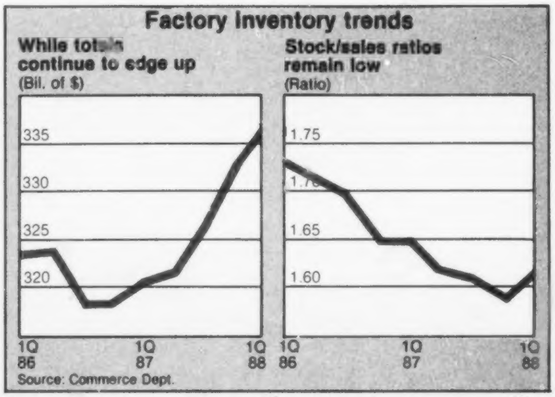
Inventories staying low

Factory inventories remain in surprisingly good shape—pretty much assuring that any new orders will be quickly translated into new production.

There was some uptick in the overall factory stock/sales ratio during the just-ended first quarter (see chart). But the increase has been very modest. More important, this key measure of day's supply remains far below the norms of recent years.

Zero in on the area of particular concern to buying executives—purchased materials inventories—and the picture is even more encouraging. The latest government stock/sales ratio for this sector is clocked in at only 1.05 months' supply—well under the 1.11 reading of 1987.

Further confirmation of continuing firm control over inventories comes from the latest NAPM Business Survey Committee report. Specifically, buyers' March holdings declined sharply—as firms adjusted stockpiles in line with production needs.



Factory inventory trends

While totals continue to edge up (Bil. of $)

Stock/sales ratios remain low (Ratio)

Source: Commerce Dept.

Also worth noting: According to some industry reports, stocks are actually quite low in sectors like machinery which have been experiencing not only improved export demand but also some upturn in domestic orders. And the same snugness seems to be shaping up in instruments.

Here's how analysts at the American Production

we've been moving successfully...

and Inventory Control Society (APICS) sum it all up: "Those industries directly related to consumer spending and housing (transportation equipment, household durables, textiles and construction equipment) continue to show some excesses. For the rest of the manufacturing sector (mainly capital goods and nondurables), inventories are relatively lean."

Behind this "keep 'em lean" trend is an increasing emphasis on just-in-time deliveries and improved forecasting techniques—plus the feeling that while some items might be a bit on the tight side, deliveries can always be arranged in a pinch.

STEEL SCENE

Steel import impact fades

Metal demand, while still buoyant, could be ready to level off a bit.

The evidence comes from the latest service center and steel buyer surveys. Nineteen percent of purchasing managers, for example, report that they expect to cut down on purchases over the next three months—compared to 16% who plan to add to them. This is the first time since last November that negative assessments have prevailed.

To be sure, the latest Steel Service Center Institute (SSCI) study is still positive about near-term business. But it should be noted that fewer are now projecting order gains through early summer—32% now versus 37% one month ago.

Many steel analysts also see shipments falling off—putting totals in the 18-19 million ton/quarter range through 1988. This is about 2.5 million tons under the 21.5 million tons shipped during the first quarter of the year. Keep a close eye on developments here.

Another indication of a breather comes from the SSCI survey that shows 13% of respondents reporting a slowdown in accounts receivable payments. That contrasts to last December when only 1% of respondents said customer payments were less prompt.

SSCI's Andrew G. Sharkey is also a bit concerned about member inventories, noting that stock levels in all product categories have risen significantly in recent months. And while high shipping rates have masked the jump, the higher stocks could be a problem if shipments falter.

This may already be starting to happen in the buyer sphere where PMs now report a 2.05 months' supply—up fractionally from the 2.00 reading of one month earlier and well

to more U.S. cities...

THIS MONTH'S BREAKDOWN

Index: 1982 = 100

	Latest level (March)	% change from: Month ago	Year ago
Bearings	109.9	−0.3	2.0
Bolts, nuts, etc.	105.2	0.1	2.0
Chemicals, inorganic	98.6	1.4	4.6
Chemicals, organic	103.0	5.0	11.2
Concrete products	109.8	0.2	0.5
Corrugated cartons	106.3	0.5	NA
Cutting tools, small	107.0	−0.1	0.9
Electric lamps (bulbs)	122.2	0.1	0.7
Electronic components	116.0	0.2	1.1
Fans and blowers	112.2	−0.3	1.3
Foundry and forge products	108.1	0.7	2.8
Fuel oil (residual)	42.2	−4.3	−16.1
Furniture, commercial	122.5	1.0	4.3
Gasoline	53.6	−0.4	−2.7
Glass, flat	109.3	0.5	2.3
Glass containers	112.5	0.0	−1.1
Gypsum products	115.0	−0.1	−9.5
Hand tools	119.0	0.3	3.4
Hand tools, power driven	110.6	0.1	1.0
Industrial furnaces	119.1	0.3	4.5
Integrating and measuring instruments	115.8	−0.3	2.5
Internal combustion engines	111.0	0.3	1.6
Lubricating oil	103.7	0.8	5.2
Lumber millwork	120.8	0.5	4.0
Material handling equipment	106.6	0.6	2.6
Metal containers	109.5	1.1	−0.3
Metal mill shapes (nonferrous)	122.0	0.9	22.6
Metal tanks	102.4	2.2	6.8
Motors and generators	119.5	0.1	4.4
Motor trucks	122.7	0.0	3.2
Office and store equipment	106.2	0.4	2.9
Paperboard	127.1	3.5	10.0
Paper boxes and shipping containers	120.3	0.7	5.7
Paper office supplies	113.0	1.4	4.4
Paint	110.6	0.7	2.9
Plastic resins	124.2	1.1	20.3
Precision measuring tools	119.2	0.2	4.3
Pumps and compressors	106.8	0.3	1.7
Refractories	112.4	−0.1	2.3
Rubber belts and belting	104.6	1.8	0.3
Scales and balances	105.0	0.2	1.4
Steel products	107.7	0.5	7.3
Switchgear	112.4	1.1	1.9
Textiles, synthetic fibers	95.5	1.0	4.6
Textiles, gray fabrics	113.2	0.6	9.0
Tires and tubes	93.3	−0.2	3.1
Transformers and power regulators	108.2	0.4	1.2
Welding equipment	115.7	1.0	4.8
Wire and cable	124.1	−4.6	22.1

and our biggest move is still ahead...

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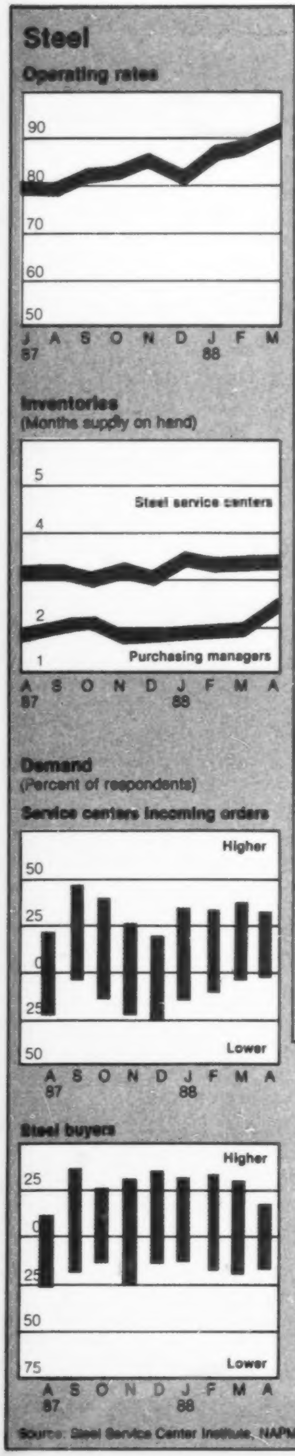
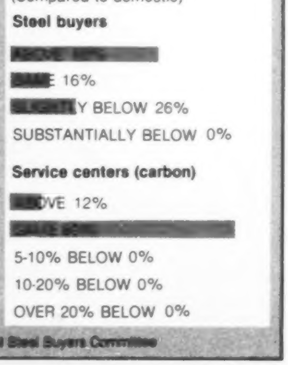




Source: Steel Service Center Institute, NAPM Steel Buyers Committee

above the 1.82 reading of just three months ago.

One thing is for sure—both buyers and distributors are now a little uneasy on this score. Thus 35% of queried buyers currently consider inventories too high relative to demand (twice as high as the number who feel they're too low). And the figures for service centers tell much the same story: The 43% rating them too high far outnumber the 3% who want further additions.

What makes this inventory reticence so surprising to purchasing managers is that it comes at a time when virtually every buyer is worrying about shortages—especially in flat-rolled products. This situation could change dramatically if current predictions for a near-term demand slow-down materialize.

In the meantime, prices continue to be a major headache. Some 90% of queried service centers are bracing for higher replacement costs over the next six months and 26% believe increases will be in excess of 5%. Compounding the problem is the virtual disappearance of import bargains. Not a single distributor reports lower-than-U.S. prices in the carbon steel sector. And only 18% note modest import price breaks in stainless (less than 10%).

The same is true of buyers. The number reporting higher import prices (58%) outweighs the 16% who note no change and the 26% who still are getting slight price breaks.

It is not surprising that imports are expected to play a somewhat smaller role in overall procurement. Buyers who are planning on less overseas dependence now outnumber those looking for more dependence by a margin of better than 2:1. Watch for imports to drop off by about one million tons this year.

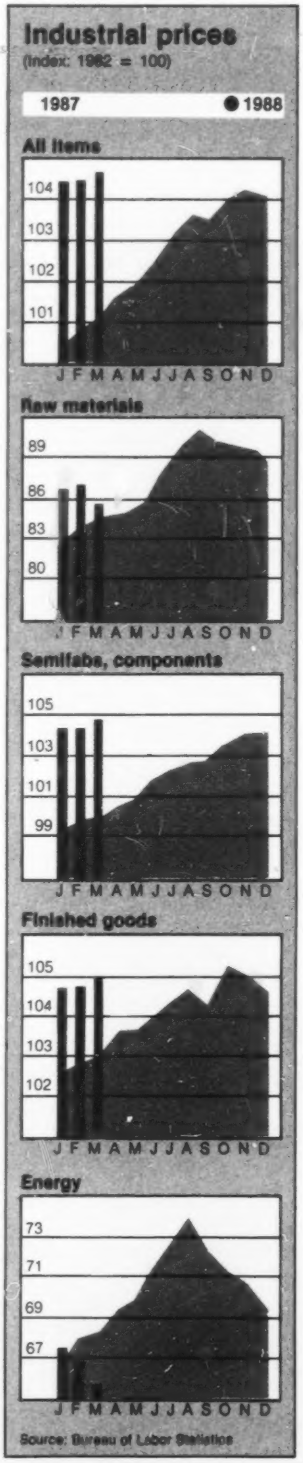
CURRENT PRICES

Commodities vary

The slow increase in industrial price averages continued last month—with Uncle Sam's comprehensive overall index advancing another 0.3% (or 3.6% at annual rate).

But this time around there were significant variations in some of the individual components that make up this closely monitored barometer. While energy quotes continued to soften, chemicals took a sharp upward jump.

Looking first at energy, prices declined another 1.3% on average—led by



Source: Bureau of Labor Statistics

falloffs in crude oil, residual fuel, jet fuel, and coal. There were some offsetting strengths—namely in home heating oil, liquid petroleum gas, diesel fuel, and lubricating oils.

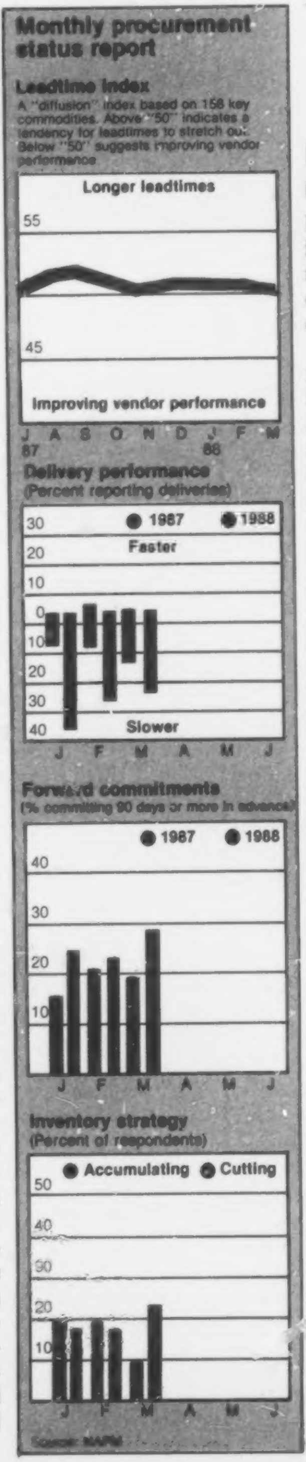
High chemical prices boosted plastic resins tags another 1.1%—increasing averages more than 20% above 1987 prices. These basic resin boosts also helped push up plastic packaging averages.

Paper and paper products continued to move up—though somewhat less sharply than in recent months. By month's end, higher quotes were being posted on paperboard, office supplies, and corrugated boxes.

Metals remained on an upward trend—led by steel mill products, aluminum mill shapes, zinc, and cadmium. Copper quotes topped out—dropping enough to allow for a 4.6% reduction in wire and cable.

Another noteworthy trend: The slow but inexorable acceleration in capital equipment. After remaining steady through much of 1987, prices rose 0.2% a month in early 1988—and last month the pace quickened to 0.4%. These conditions reflect a basic change in market conditions due to better demand and less competition abroad. More important, further increases in this sector seem inevitable.

There were a few areas—aside from energy—where prices actually weakened a bit last month. On the decline were fans and blowers, instruments, plywood, non-ferrous metal ores, and inedible fats and oils.



Monthly procurement status report

Leadtime index

A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance

Delivery performance

(Percent reporting deliveries)

Forward commitments

(% committing 90 days or more in advance)

Inventory strategy

(Percent of respondents)

Source: NAPM

PROCUREMENT STATUS

Leadtime index now at 50

Leadtimes are stabilizing—a welcome development after the steady increases of the past few quarters.

PurchasingWorld Magazine's exclusive leadtime index is now in the neutral 50 zone (see chart), implying that the stretchouts that have been occurring are now being offset by shrinkages.

Confirmation comes from the latest NAPM Business Survey Committee speed-of-delivery report. An impressive 72% of respondents say there has not been much change in vendor performance over the past month—significantly better than the 66% figure reported two months earlier.

Also note that 47% of the NAPM survey respondents say they are ordering production materials on a 30-day basis—again not much change from the previous month.

This trend toward stabilization is likely to continue—at least over the next quarter. During this period, industrial output should advance at a 3-4% rate. Indications point to basically steady rather than rising factory operating rates over the next few months.

The summer doldrums should provide temporary relief. Vendor delivery performance has traditionally improved in June, July and August. There are still a fair number of procurement problems—most notably in metals, electronic components and a few petrochemicals.

And the longer-term outlook (fall and winter) is far from clear. Should the slower growth pattern continue, there seems to be little concern other than seasonal tightening toward year-end. Should the economy take off, there would be little supply cushion to meet big demand increases.

This lingering uncertainty is one reason for *PWs* decision to revise its regular leadtime table. An expanded and more sensitive rundown—based on a substantially larger sample—will become a regular monthly feature—starting in June.

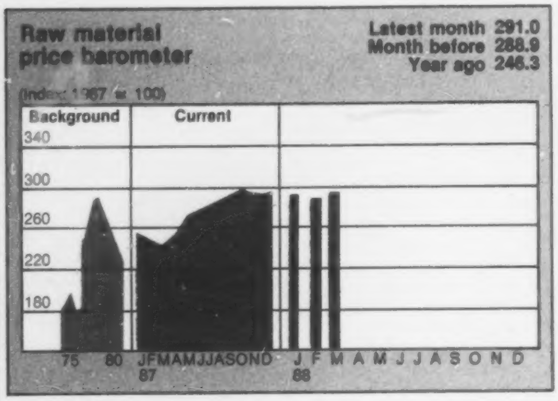
Coming next month...

Steel demand is so strong that some domestic mills can not ship quick enough even though their plants are running at 90% of capacity. Some mills are petitioning the United States Commerce Department for "short supply" licenses that would permit them to import more foreign steel than current import quotas allow.

Some feel that solid transportation price increases are inevitable, particularly following the Teamsters' contract agreement in the trucking industry.

Imports from countries closer to home are looking better to buyers especially in light of the impact of the weaker dollar on the products of off-shore nations.

BUSINESS DATATRAK



LATEST SPOT MARKET PRICES

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	16.50
Steel, bars, Pitts., cwt.	16.50	16.50	16.50
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	19.45
Steel, plates, Pitts., cwt.	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	28.15	28.15	26.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	1.110	1.025	.630
Antimony, N.Y., dealer, lb.	1.09	1.09	1.12
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	1.76	1.66	1.32
Brass, yellow, [sheet], lb.	1.71	1.61	1.27
Cadmium, N.Y., dealer, lb.	8.50	7.00	0.95
Copper, electrolytic, wire bars, refd., lb.	1.12	1.02	.68
Copper sheet, over 24 in., lb.	1.84	1.74	1.41
Lead, common, N.Y., lb.	.340	.340	.260
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	345.00	350.00	280.00
Molybdenum, oxide, dealer, lb.	3.70	3.30	3.05
Nickel, cathode, dealer, lb.	8.40	4.65	1.75
Platinum, dealer, oz.	533.00	480.00	575.00
Silver, N.Y., oz.	6.42	6.29	6.90
Tin, N.Y., dealer, lb.	3.19	3.18	3.15
Zinc, Prime West, East St. Louis, lb.	.52	.47	.37
Zinc, die casting alloy, No. 3, lb.	.545	.525	.445
PAPER			
Uncoated book #3 offset, ton	890.00	890.00	890.00
Watermarked bond, ton	985.00	985.00	985.00
Gummed sealing tape, carton	17.42	17.20	16.51
Grocery sacks, ton	435.00	435.00	390.00
Solid bleached paperboard, ton	650.00	650.00	620.00
Kraft linerboard, 42 lb., unbleached, ton	410.00	410.00	350.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.280	.278	.242
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.22	1.22	1.15
Cotton middling, 1", N.Y., lb.	.613	.586	.540
Printcloth, 48", 80x80, N.Y., spot. yd.	.550	.535	.610
Army duck, 37", 13 oz., yd.	1.510	1.510	1.405
Blended printcloth, 64", 78x54, yd.	.72	.67	.90
20s combed yarns	2.04	2.04	1.77
Wool 64s, Staple, lb.	4.50	4.25	2.55

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	100.00	100.00	105.00
Benzene, petroleum, tanks, Houston, gal.	1.15	1.10	1.55
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.685	.685	.910
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.53	.53	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.34	.32	.27
Polyethylene resin, low density liner film grade (market place), lb.	.425	.425	.285
Polypropylene, homopolymer grade (market price), lb.	.495	.495	.350
Polystyrene, general purpose grade (market price), lb.	.580	.565	.420
Polyvinyl chloride, pipe grade (market price), lb.	.40	.40	.315
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.46	.46	.38
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	152.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.80	.80	.77
Xylene tanks, gal.	.890	.760	.795
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	326.30	323.80	328.05
Lumber 2x2 pine, mbf, cl	332.35	326.00	327.84
Plywood, plyform, ¾", msf, cl	579.45	568.05	575.00
Plywood, ⅝", msf, cl	415.40	400.25	378.60
Cement, bulk, ton, tl	64.44	64.07	63.66
Sand, ton, cl	7.32	7.32	6.72
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	49.04	48.94	48.43
Crushed stone, 1½", ton, cl	8.40	8.37	8.18
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.93	0.93	0.84
Gypsum sheathing, ½"x1"x8", msf, tl	229.93	231.21	206.94
Brick, common, per thousand, tl	204.62	204.62	187.35
Asphalt paving, AC-20	131.99	137.93	128.04
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.57	7.57	7.13
FUELS			
Crude oil (W. Tex Int Cush), bbl.	18.10	16.00	18.45
Diesel (reseller rack, Chi), gal.	.538	.448	N.A.
Fuel oil No. 2 (N.Y.), gal.	.5075	.4600	.4825
Fuel oil No. 2 (Gulf spot), gal.	.4800	.4225	N.A.
Fuel oil No. 6 (N.Y.) contract cargo, bbl.	15.50	16.75	N.A.
Gasoline (reg lded NY), gal.	.5325	.4525	.5060
Gasoline (reg unlded NY), gal.	.5200	.4400	.4475
Kerosene (reseller rack, Chi), gal.	.5900	.4930	N.A.
Propane (Mt. Belviu, Tex), gal.	.2450	.2400	.2475
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	113.00	121.00	77.00
Steel, No. 1 hvy., dlvd., Chi., ton	117.00	117.00	71.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.925	.920	.575
Copper, No. 2, East, wholesale buy, dlvd., lb.	.845	.810	.495
Brass, red, East, wholesale buy, dlvd., lb.	.885	.880	.535
Brass, yellow, East, wholesale buy, dlvd., lb.	.425	.415	.330
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.695	.625	.385
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.785	.710	.420
Zinc, old, East, wholesale buy, dlvd., lb.	.240	.200	.200
Lead, clean solids, East, wholesale buy, dlvd., lb.	.205	.210	.155
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	25.00	30.00
Paper, old corrug. box, dlr., N.Y., ton	10.00	10.00	25.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.12
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.33	.30	.20

[Sources: Metals Week, American Metal Market, Engineering News-Record (20-city averages), Wall Street Journal, Journal of Commerce, Chemical Marketing Reporter.]

trast to 1985 and 1986 when these prices remained relatively unchanged.

- **Metal cans:** Rising aluminum and steel costs will make for some acceleration here, too. Steel cans are expected to be up 2.6% this year—with steel barrels and drums up by an even larger 5.9%. Some deceleration in the rate of rise is seen for 1989 as increases in the basic metals become smaller—with some corrections possible in aluminum tags.
- **Glass containers:** Best buys will be here because of a low 1.6% overall projected increase for 1988. Unlike other modes, there could be some acceleration in 1989. Reason: Price hikes in competing modes will give glassmakers an opportunity to beef up margins without suffering market share loss—an opportunity WEFA doesn't believe will be overlooked.

Upshot: The end of the period of relatively flat glass container prices is near. Prices should embark on a steady upward climb this year—and continue through the end of the forecast horizon (late 1989).

Packaging prices going up

Packaging buyers are budgeting for some fair-sized price increases this year. The biggest advances will be centered on corrugated boxes and plastic types. But few modes are expected to escape unscathed.

So say the majority of purchasing managers responding to a new nationwide *PurchasingWorld* magazine packaging survey. They add that most of the upward impetus will come from rising raw material cost pressures—although several feel another year of relatively good demand will also be contributing to higher asking prices.

And there could be more boosts coming before year end. Nearly half of the responding corrugated buyers are bracing for further increases. Many who use plastic films are also anticipating further increases in the months ahead.

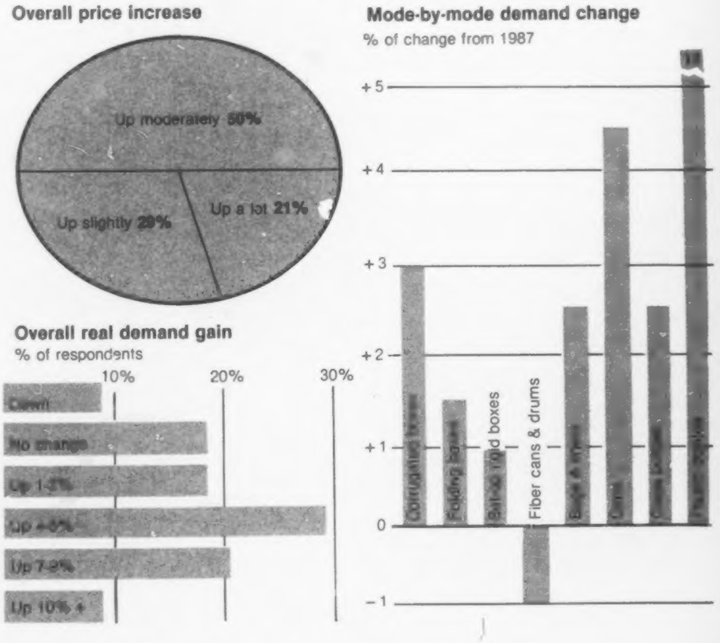
As suggested earlier, demand and cost could be behind some of these increases. *PW* survey respondents, for example, are expecting to increase their intake of packaging materials by 4% this year—actually above the 3.7% gain these same PMs recorded for last year.

The chart gives a more detailed rundown on some of the individual demand patterns anticipated—based on Commerce Department estimates and talks with *PW* survey respondents.

Also worth noting: The *PW* survey suggests that there is now some concern about availability. Roughly one out of every four buyers, for example, feel there could be some problems. Paperboard and plastic films are mentioned most frequently in this respect—as both raw materials operate at close to full capacity.

Another obvious worry is holding the line on cost increases. To keep price boosts down, buyers are leaving no stone unturned—stepping up their efforts at redesign, the use of lighter gauge materials, substitution and the use of more long-term contracts.

How 1988 packaging trends shape up



Source: PurchasingWorld, U.S. Commerce Dept.

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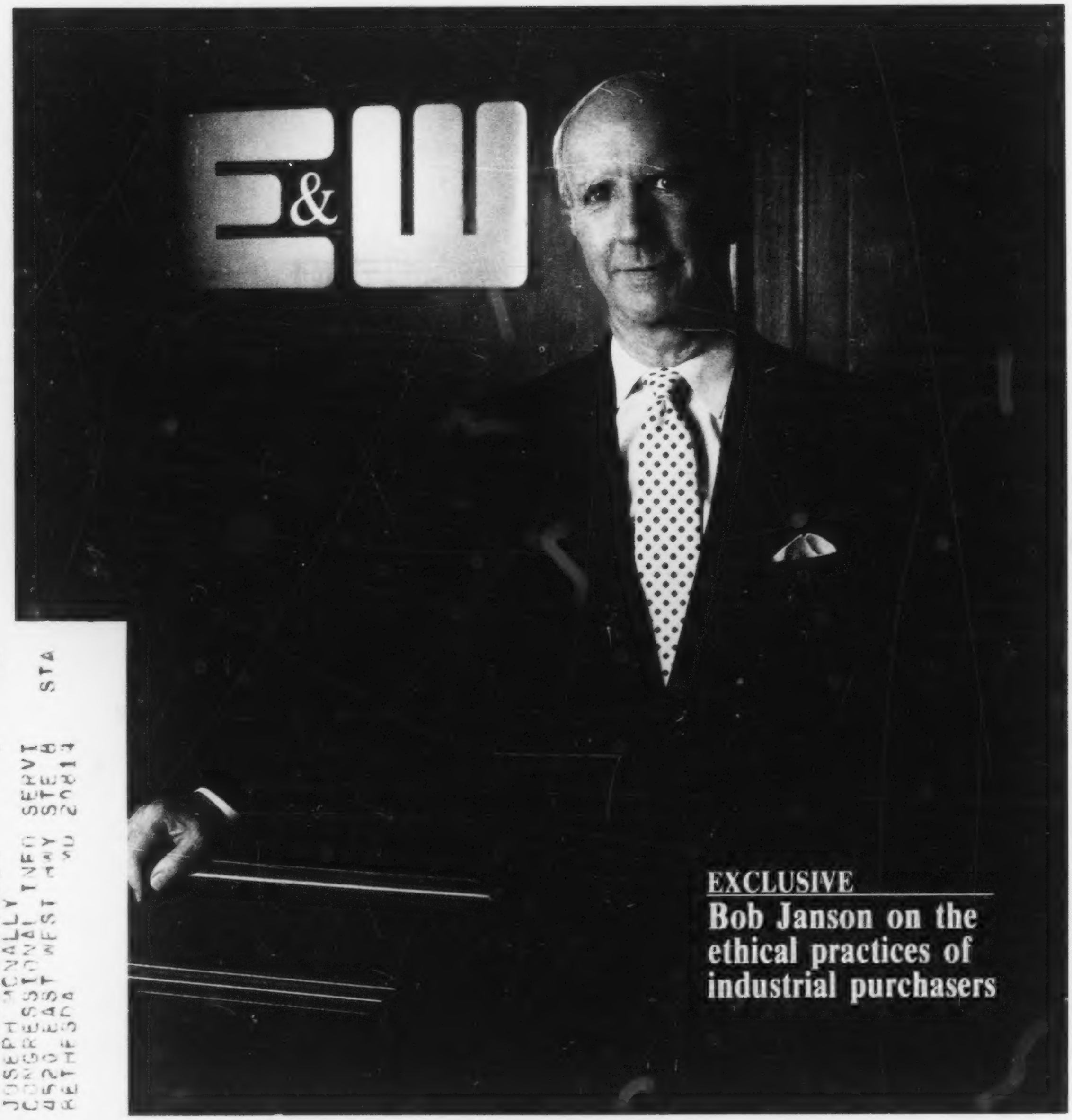

EXCLUSIVE

Bob Janson on the ethical practices of industrial purchasers

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Three scenarios for the steel scene—the good, the bad, and the ugly

Delivery performance is seen as a quality issue

Electronic data interchange changes office procedures

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What are the ethical challenges today's purchasing professionals face—and how are they responding to those challenges? These and other questions are the subject of a comprehensive Ernst & Whinney study on purchasing ethics. The somewhat surprising results may prompt *PW* readers to reexamine their companies' ethical policies.

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A case can be built for inflationary activity based on recent producer price trends. But higher prices over a short period of time don't necessarily signal the start of a price spiral. *PurchasingWorld* magazine's Bob Reichard sees signs that significant inflation is not in the near-term picture.

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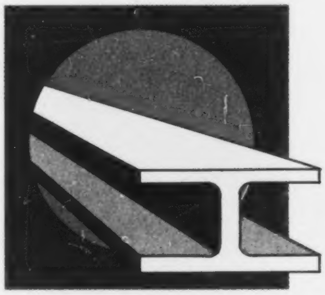

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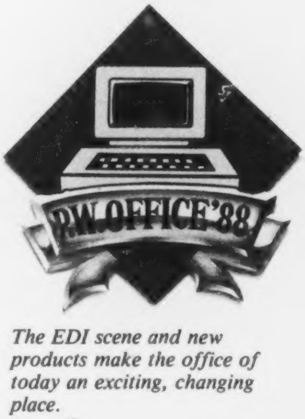

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▪ Before you take the plunge into the world of EDI, take a good hard look at how it will completely change the office/clerical procedures throughout your company.

No charge, management consulting referrals

Locating the appropriate management consulting firm can be simplified using the free services of ACME, Inc., the association of management consulting firms. ACME's extensive data bank on the practice areas and specialties of the leading independent management consulting firms that comprise its membership helps companies locate firms with the qualifications and experience to match their specific needs. **Circle 95**

Custom metal parts contract manufacturing

Contract manufacturing of metal stampings in steel, brass, copper, aluminum and composite metals is offered by Kimball Electronics, Inc. Services include product design and engineering, tool and die engineering, stamping and forming, fabrication, assembly, and advanced quality control procedures. **Circle 97**

True cost of imports versus domestic sources is revealed through use of free worksheet

To assess and evaluate the hidden cost burden of foreign-made parts and machinery, the National Tooling and Machining Association (NTMA) is offering free its *True Cost Worksheet*.

The worksheet has been designed to standardize purchasing evaluation procedures and to provide additional justification consistently and uniformly across many jobs. It provides a framework for purchasers to develop customized evaluation procedures for their companies in order to determine total and actual costs.

Major hidden costs of imports, according to NTMA, are: customs duties, freight, insurance, delays in delivery, difficulties with design, alterations in engineering specs, delays and errors due to communications problems, and additional paperwork. These hidden costs, notes the NTMA, are not reflected in the quoted price for certain foreign-made products. Thus, the total cost of sourcing abroad could be significantly higher than the quoted price, bringing the actual costs in line with prices quoted by domestic sources. **Circle 78**

Clean and recycle a 'Dirty Dozen' gloves—FREE!

Cleaning and recycling industrial work gloves can effect a direct cost savings of 80¢ to $5 per pair, according to Richard O'Sullivan of Arbill, Inc. Arbill is offering to clean and recycle a 'Dirty Dozen' industrial gloves at no charge to introduce this service.

Many employees, notes O'Sullivan, "find it easier to handle products without breakage or damage because industrial gloves often become more supple after reconditioning. It is also affordable to change the gloves before they become sweat laden or otherwise uncomfortable, assuring maximum welfare."

Direct savings of 60% of new glove replacement cost, is claimed, by issuing a combination of recycled and new work gloves instead of discarding soiled gloves. Arbill also recycles wipers, aprons, rags, and other products used to remove dirt, grime, and some hazardous wastes.

For a special container to be used to get a "Dirty Dozen" industrial gloves recycled free, **Circle 94**

Free regional industrial buying guide

Regional buying guides that pinpoint industrial suppliers in 14 distinct geographic areas are available free to purchasing professionals for their specific locales.

The guides include product and supplier information, product and service headings, A to Z company listings, and cross-references. The company data includes name, address, telephone number, and type of firm.

Local sources for over 3,500 industrial products are listed in each regional directory. If a local source isn't listed in your region for a product you need the publisher provides a free locator service.

The directories cover the following 14 regions: Eastern New England; Western New England; Greater New York; Western/Central New York; Capital Cities; North Texas-Oklahoma; Texas Gulf; Greater Michigan; Greater Delaware Valley; North Jersey; Greater Allegheny; North Central Tri-State; Northern Ohio; and Ohio Valley. To get a free directory for your area **Circle 92**

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Most Americans are positive about their jobs

Most Americans, 65%, have a positive attitude toward their jobs according to a survey of personnel managers at the nation's 1,000 largest corporations conducted by Accountemps. Another 32% tolerate

...continued

Will the lid stay on inflation?

Are inflation pressures building up or not? A seemingly good case that they are can be built up by quoting latest price statistics. Current industrial producer price trends have accelerated—from last year's 2.6% advance to about 4% over the past few quarters.

Increases at the primary stages of production—notably crude and intermediate non-food products—have been rising at an even faster pace. It's hard to deny that steel, nonferrous metals, paper and plastic resins all command a lot more than they did a year ago.

Finally, the latest findings of the NAPM Business Survey Committee show that 50-70% of the group's 250 buyers are experiencing higher procurement tags far outweighing the 1-3% who have been lucky enough to negotiate reductions.

But higher prices over a short time period don't necessarily signal the start of a new price spiral. The big question is about the factors that will be influencing the next few quarters.

Some "nervous nellies" point to continuing supply problems. But this should not be exaggerated. The 85% operating rate (historically the starting point for any really big spurt) is nowhere in sight. Note that the current 82%-plus figure has remained relatively unchanged since the beginning of the year as modest increases in industrial production are offset by increased spending on new production capacity.

Problems remain—notably in the raw material area. But the situation here seems to be stabilizing—with some reduction in operating rates if demand slackens in the second half. This could already be happening in the primary processing industries where the average operating rate has recently slipped about 1%.

Also worth noting on the capacity front: Both private forecasters and Uncle Sam expect capital spending to rise nearly 8% this year after adjusting for inflation. These studies also suggest that the biggest bucks will be spent on those industries that really need to add capacity—notably paper and chemicals.

Upshot: As long as exports don't surge and U.S. demand remains temperate, manufacturers should be able to meet orders with little or no trouble.

The talk about rising wage cost pressure also has to be taken with a grain of salt. Here again, the worriers have some numbers to cite—compensation costs have risen 3.9% over the latest 12-month period—up 3.1% from the previous 12 months.

The point should be made that the 3.9% figure is the second lowest in a decade. And more important, the productivity offset is still a factor—knocking about 1% off the overall pay figure—and 2% off in the manufacturing sector where efficiency gains have been coming in at a faster clip.

Encouraging news comes from the energy area where OPEC is having trouble maintaining prices—much less raising them. Conclusion: Energy averages this year won't be much above 1987 average levels.

There's little to indicate any big new spiral this year. Look for the nation's general inflation rate to climb a notch or two—to maybe 5%.

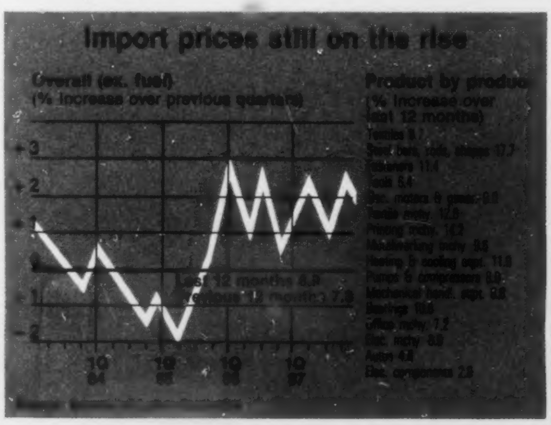
Import prices keep rising on the soft dollar

Finding import bargains continues to get harder. Look at the accompanying chart which shows overseas tags (except fuel) advancing 2.3%. Compared to a year earlier, these quotes are up 9%.

Blame it all on the delayed impact of the sharp decline in the value of the dollar during 1987.

Here's a more detailed rundown of the first few months of 1988:

- **Crude materials:** A 5.8% jump in the first quarter, leaves this key category 12% above a year earlier. Leading the advance for the quarter were metal ores and scrap (up 9.6%), and pulp and wastepaper (up 7.1%).
- **Chemicals:** The 3.7% advance of early 1988 follows an even bigger 4.3% jump in the fourth quarter of 1987. Specific increases over the latest 3 months: medical and pharmaceutical products (7.1%), organic chemicals (2.7%), and inorganic chemicals (2.0%).
- **Intermediate manufactures:** Steel products jumped 5.3%, enough to bring 16.8% year-to-year advance. Other notable increases include paper and paperboard products (4.4%), nonferrous metals (2.7%), and metal manufacturers (2.8%).
- **Machinery and transport equipment:** Only a 1.7% overall gain was noted over the past quarter. But bigger boosts were reported for electric machinery (3.6%), specialized machinery (3.3%), general industrial machinery (2.4%), metalworking equipment (2.2%), and motor vehicles (2.1%).



Price inflation at the office

A new survey of 350 manufacturers by the Quill Corporation puts the advance for the half year ending this October at 3.8%—well above the 1.2% estimate for early 1988 made six months ago.

Why the acceleration? Much of it, says Quill, can be traced to rising paper, plastic and metal material costs—plus the devaluation of the dollar against the Japanese yen.

Here are the product-by-product details:

Typing supplies: This group should rise about 2.0%—up slightly from previous months due to a 6-7% boost in correction fluid.

Data and word processing supplies: The average increase should be 1.8%. But computer paper and labels should rise by 6-7%.

Reproducing supplies: Budget for a 5.6% boost—more than three points above the past six months. This is due to increasing copy paper and toner quotes.

Envelopes and stationery: Rising paper costs will result in a 6.8% boost—almost four points higher than the predicted change for the last six months.

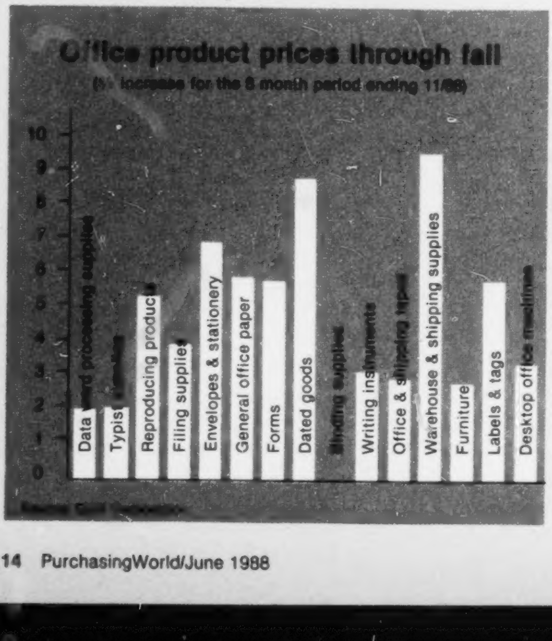
Writing instruments: Much of the expected 3.3% rise will be fueled by the softer dollar. But cost increases in plastics (primarily styrene) will affect marker and highlighter prices.

Office and shipping tapes: Higher costs of adhesives (natural rubber and rubber resins) and film (polypropylene) will push tape tags up approximately 3%.

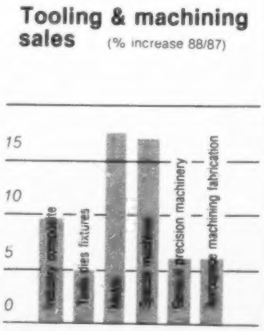
Furniture: A 2.8% rise is projected.

Reason: Rising costs of corrugated and steel.

Desktop office machines: Averages will rise 3.2%—up from the 1.2% level predicted for the last six months. The increases in calculators and copiers will be almost entirely due to the softer dollar. Typewriter prices should remain basically flat.



Source: Quill Corporation



Good year for tooling and machine

Another good demand year seems all but assured for the industry which designs and manufactures tools, dies, molds, gauges and special machines for many manufacturers. Right now all signs point to about a 9% advance in overall sales this year. But there could be differences in individual sectors. Hence these more detailed forecasts: Special machines (12%), molds (13%), precision machining (6%), aerospace (6%), and tools, dies and fixtures (5%).

Powder metal parts gain

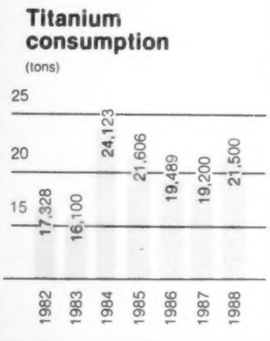
Figure on sharply increased purchases as uses broaden over the next few years. Iron and steel types should lead the way—with eye-opening 16.4% annual gains seen over the 1987-1992 period. The figures, based on a new study by Cleveland's Freedonia Group, also calls for solid 8% gains for copper and copper-based powder metal parts—especially in the bearings and electrical/electronics area. Aluminum alloy parts also could rise—finding increased applications in the auto and aerospace sectors. Price increases should be modest—about 3% a year overall during the 1987-1992 period.

Natural gas tags drop

Spot tags have dropped after excessive buying for storage caused a brief surge this past winter. Benchmark wellhead quotes (U.S. Gulf Coast) recently declined to $1.25-1.30/MCF—off about 38% from recent peaks and 13% under year-ago levels. Even so, the demand outlook remains fairly bright as the trend toward more long-term supply contracts between gas buyers and sellers continues. These contracts, incidentally, now allow for flexible prices based on changing market conditions.

Aluminum advances slowing

Higher ingot tags continue to spread downstream to fabricated products—with one firm scheduling a new double-digit increase for aluminum cans. But the advance could soon begin to run out of steam as increasing production and somewhat smaller demand gains bring the market back into balance. This, in turn, could make for some modest ingot declines by summer or fall. The long-term outlook also points to some price relief as 1) previous shutdown facilities are reactivated and 2) another round of smelter expansions (in Australia, Venuzuela, Canada and the Middle East) gets under way over the next few years.


Titanium consumption

(tons)

Boosts for titanium

Prices are moving up on a broad front. Examples: Alloy sheet and plate will be advanced 5% while commercially pure plate and billet jump 7% and 10%, respectively. All hikes apply to fourth quarter shipments. Behind the boosts: Rising raw material, energy and environmental protection costs. Another factor could be strong demand—with domestic consumption this year expected to jump 12% to near 21,500 tons. Long-term prospects are also quite bullish—with a 6% annual rate of increase seen through 1992.

Will freight hikes stick?

Truckers may have some difficulty in making another rate hike stick. One alternative: A tightening up on rate discounts—and perhaps some switching of freight to non-union affiliates. Meantime in ocean shipping, a drop in volume from Asia to U.S. ports is leading to fierce competition and lower tariffs on many commodities. Sign of the times here: Many vessels are sailing from the Far East only about 75% full compared to 90% full last year. U.S. to Europe rates are moving up—reflecting increased American shipments to the continent.

running well above the all-U.S. 16.3% rate reported by Coldwell Bankers (a real estate firm) include Dallas, Denver, Houston, Kansas City, Miami, New Orleans, St. Louis, Salt Lake City, and San Jose. Industrial vacancies, too, remain quite high (5.8%)—well above the 4.6% figure reported as recently as late 1984.

Electronic components tight

Still no end in sight to the 256K DRAM runup. Spot market sales now run near $11/chip. Contract buyers are faring only a little better—with averages here in the $3-6 range. Also worth noting: While the shortage of DRAMS has received most of the publicity, tightness also persists in printed wire boards. As for overall semiconductor demand—all signs now point to a big 20-25% dollar advance for 1988—and another 15% jump in 1989.

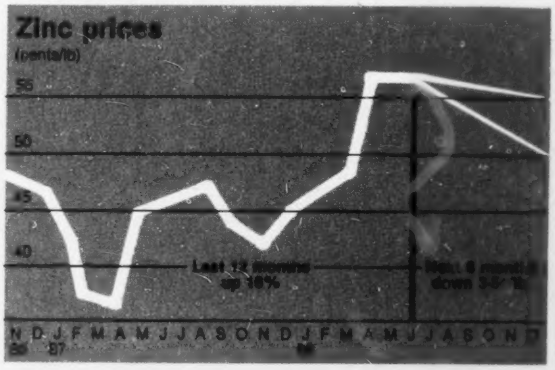
Zinc demand is up and inventory is down

CURRENT SITUATION: The plating and alloying metal is riding high these days. Right now the going quote has jumped into the upper 50s range—a far cry from the 37¢/lb low prevailing as recently as last spring. Other signs of strength: Several producers are reported to be sold out of SHG material through June—normally a quiet month because of slower car production. **Business remains strong as both galvanizers and diecasters buy up all the available supply.** This, in turn, has pushed producer inventories down to under 45,000 tons—off
from the previous month.

MAND: The fast early 1988 start virtually assures
ther plus year. Best bet for overall slab zinc con-
iption: A rise to near 1.05 million metric tons—con-
iing the long-term domestic advance that began after
2 when only 710,000 metric tons cleared the market.
ch of the increase both this year and last can be traced
ncreased use of galvanizing—though the brass mar-
is faring quite well, too. **As for the longer pull—all**
gns point to about a 2% annual growth rate into the early 1990s.

SUPPLY: Improving availability is seen after midyear as demand flattens out a bit and production continues to gradually increase and a new Alaskan facility comes on stream late this year. Canada, accounting for 65% of total imports, will be another prime supplier. Eventually, new production is planned from Canada, Australia and the additional Alaskan mine. **Best bet: Market balance by late in the year** and maybe even some surplus by 1989 if projections for slower overall domestic growth materialize.

PRICE OUTLOOK: Tags should begin to top out—if not in the weeks immediately ahead then certainly by summer when demand normally tapers off. Any decline at that time and beyond is likely to be quite modest—with 3-5¢/lb being shaved off current levels by late fall. The slowly improving supply situation detailed above should help keep a lid on prices into 1989. Preliminary econometric projections—those which factor in all pertinent supply, demand and cost variables—**suggest tags dropping into the 50¢/lb range by early 1989.**



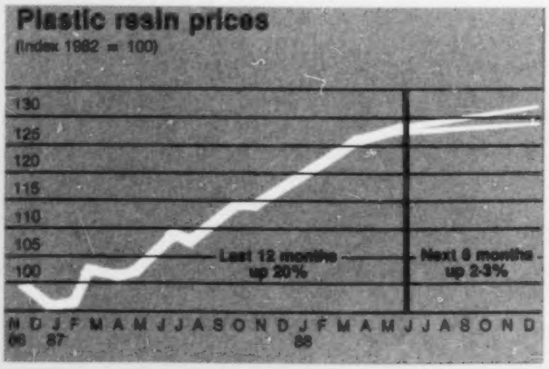
Plastic resin makers running near peak capacity

CURRENT SITUATION:Plastic resin markets remain buoyant—with prices continuing to advance. These hefty increases over the past year tell the story: LDPE liner film (48%), HDPE injection molding (51%), PP homopolymer (39%), PS general purpose/crystal (23%), PVC pipe grade (23%), and ABS pipe grade (31%). **Sparking these advances has been a combination of rapidly rising feedstock costs, strong demand and tight supplies.**

DEMAND: The industry—even with some second half deceleration—should rack up substantial 1988 gains. Best bet: a 4-5% overall advance—all on top of 1987 when totals jumped by 11.7%. PP should lead this time around—with a 7% increase anticipated. Other projected demand increases in descending order are HDPE (6%), PS (5%), ABS (4%), LDPE (3%) and PVC (2%). As for 1989 assume a continuation of current slow, steady growth—**and another 3-4% overall increase.**

SUPPLY: The big demand gains of the past few years have made for considerable tightness. This year the industry will operate at near 95% of its potential—and near 100% in the case of HDPE and PP. The only resin in the volume thermoplastic area under 90% is ABS (near 80%). **But generalized relief is on the way—as big chunks of new capacity are put in place during 1988 and 1989.** Some 13% will be added onto overall production potential over this two-year period.

PRICE OUTLOOK: More increases seem inevitable—as key feedstocks like ethylene and propylene continue to rise. **But boosts will be more moderate than in recent months—because of decelerating demand-supply pressures and the improved profit margins now reported by most producers.** Price averages should advance 2-3% over the next two quarters. And by next year at this time, the typical resin should be commanding only 5-6% more than it does now.


Plastic resin prices

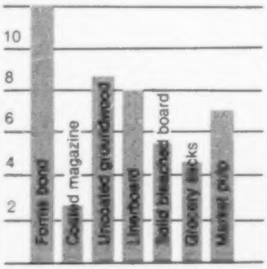
(Index 1982 = 100)

Copper stays nervous

The red metal remains on the nervous side as supplies become a bit more ample. In any case, there's apparently enough to go around for immediate needs. Buyers don't seem anxious to enter the market for additional metal—particularly with the low-consumption summer season approaching. Other signs that tags are more likely to decline than increase: Rising producer stocks and increased sales by the Chinese. A modest supply excess should develop this year as production rises 5-6%. And by early 1989, tags could well drop into the 80-90¢/lb range.

Paper produced prices

(% unused since beginning of year)



Send in the clones

Clones of IBMs PS/2 line, due out in the next few months, may not be all that much under the big company's models. Certainly nothing like the 25-40% price breaks of a few years back (when IBM first introduced its PC line) are anticipated. Based on cost comparisons, the price gap now is more likely to be only in the 15-20% range. Reasons: IBM now makes its own parts quite efficiently—plus the fact that the firm will be charging for licensing patents on PS/2 technology.

Paper cuts upward

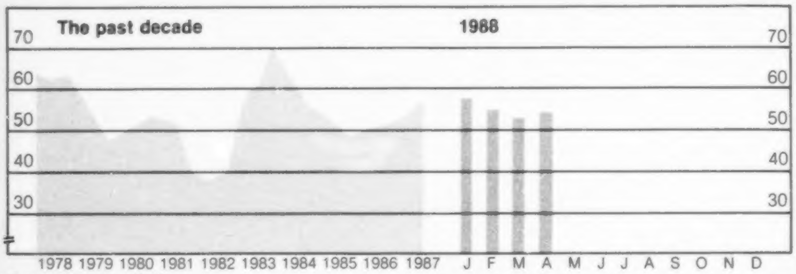
Advances are still the order of the day. Even bleached board, after holding relatively steady in 1987, is beginning to move (up $35/ton recently—to $685/ton). Corrugated is also on the rise to reflect earlier linerboard increases. And market pulp has jumped another $40/ton in response to the weak dollar—with more increases possible here later this year. Finally, on the fine paper front, further boosts in uncoated lines are noted—with only the lower grades of envelope and tablet remaining on the easy side.

Disk drives spin slower

A slowly eroding market has forced digital equipment to knock as much as 51% off some of its models—including the high capacity SA482 and RA82 Winchester units. A company spokesman adds it follows similar reductions by competing vendors. Weakness in this area is also confirmed by the Quill survey which notes that this is one of the few areas in the "data and word processing supply" area where prices are expected to decline over the next six months.

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

And the growth goes on

Growth is still the order of the day. All signs point to a second quarter repeat performance of the January-March 2-2.5% real GNP advance.

One major plus sign: Earlier fears of an inventory build-up are quickly disappearing. Right now stocks are growing in line with sales. Result: The inventory/sales ratio remains relatively low—allowing for continued growth as new orders roll in.

Equally encouraging is the still-strong pace of consumer spending. This is particularly true in autos, where sales of domestic models set for this year are being clocked in at a strong .6 million annual rate. Some of this firmness is due to a shift away from more expensive foreign models.

Other consumer product lines are also moving well. Reason: Consumer buying attitudes remain upbeat. Add in rising personal incomes and consumers will have some extra money to support their confidence.

Durable goods orders are also looking up. At latest report they were running at an all-time high—8% above 1987—with about half of the gain attributable to increased physical volume (see chart).

Much of the increase can be traced back to improved capital spending plans. The latest government survey suggests that plant and equipment spending could be up 8% after adjusting for inflation. Particularly strong here: The metals, machinery and paper industries—sectors that have experienced rising demand (largely because the weak dollar has helped them compete with foreigners). The paper industry now projects a 27% increase in investment for the year.

Also supporting projections for improved capital spending is a big jump in machine tool orders. The first quarter total, according to preliminary estimates, was the highest for any quarter since the 1981-82 recession. And brisk buyer inquiries indicate good business for at least another 3-6 months.

Construction contract awards are bumping along under 1987 levels (see chart). Commercial construction is behind much of the sluggishness—though residential building isn't strong either.

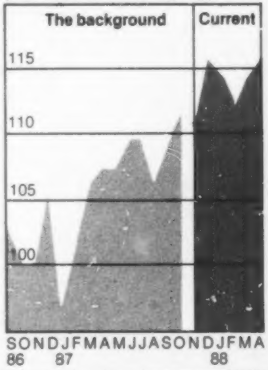
But the latter could pick up in the months ahead. Reason: Buyers are likely to move in anticipation of the somewhat higher mortgage rates that are now being projected for the second half of the year. But construction, even if the lull continues—doesn't seem to be having much of an impact on overall employment. The jobless rate has recently fallen to 5.4%—the lowest level in 14 years. It suggests that top management is betting on continued business improvement.

This thesis is also supported by still-brisk help wanted advertising. This key indicator of business need for labor is close to the all-time high hit in September 1987, before the stock market tumble.

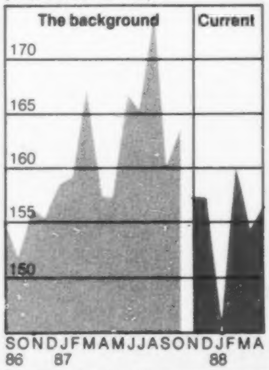
Most analysts are raising their 1988 forecasts. The 51 economists interviewed monthly by Blue

Leading indicators

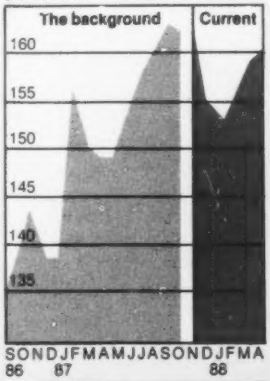
1. Durable goods orders
(Billions of $, seasonally adj.)



2. Construction awards
(Index: 1982 = 100)



3. Help wanted
(Index: 1967 = 100)



Chip Economic Indicators tell the story. Their average prediction is for a 2.7% increase in real GNP for 1988—significantly above the 1.9% projected gain made right after last fall's Wall Street crash.

And higher industrial production is expected to accompany this improving GNP trend. ***PW*** forecasts suggest industrial output could outpace the GNP figure by more than 2% this year.

Global wage rates

The United States can no longer claim the distinction of being the highest wage rate country in the world.

A new government study finds that there are several European countries with higher pay costs. In Switzerland and Germany industrial worker pay tabs now run 27% and 25% above the American $13.46/hour. And 12% premiums are noted for Sweden, Belgium and the Netherlands. (see chart)

France, Italy and Canada aren't too far behind the U.S. with pay figures lagging domestic levels by only 8%, 8% and 11% respectively. The Japanese have been the most spectacular—with a 50% lag in 1985 narrowing to only 16% by 1987.

The weaker dollar has been a major factor in making American costs more competitive *vis a vis* many of our overseas industrial competitors. But U.S. wage restraint has also played a role.

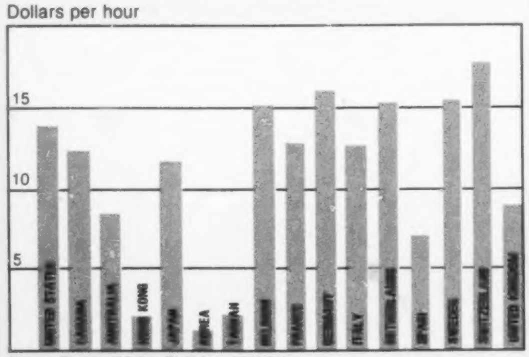
Hourly compensation rose less in this country than in certain key competitive countries even when measured in national currency terms.

Also helping the U.S. along has been better-than-overseas productivity gains. While this report doesn't look at improving efficiency, this suggests that competitive improvement in terms of unit labor costs is even better than indicated by looking at wage rates alone.

And this is one reason our real trade balance is improving. This year projections call for a declining red ink figure in 1982 dollars—from $135.5 billion in 1987 to $110 billion for 1988.

Wage rates: A global comparison

(Hourly cost per production worker)



Source: Bureau of Labor Statistics, 1987 Data

Thus, in nations with low wage rates and currencies tied to the dollar, the U.S. remains at a major disadvantage. Wage rates in Brazil, Korea and Taiwan are at 11%, 13% and 17% respectively of American levels—a fraction of comparable U.S. readings.

Cut those distribution costs

Don't forget distribution outlays when planning your next cost-cutting drive.

A report just released by Davis Database suggests that the sums of money involved are substantial (7.4% of the total sales dollar) for a group of firms that have been surveyed since the beginning of the decade. These firms have indicated that they can pare this percentage significantly.

The latest readings (for 1987) suggest respondents have cut costs 4.2% when expressed as a percent of sales. This makes the seventh consecutive year that this overall percent-of-sales figure has declined.

Progress is uneven as far as type of costs being cut. The biggest improvement of 1987 came in the inventory carrying charge category. The decline (again in terms of percent of the sales dollar) came to 9.9%—far above 1987's 3.8% reduction.

The Englewood Cliffs, NJ management consulting firm credits the inventory improvement to three factors: a favorable and stable low-cost business climate, increased automation, and increasing use of just-in-time inventory systems. Davis Database adds that the challenge will be to sustain momentum now that the big, early gains that usually accompany a new approach have been made.

A 7.1% reduction was noted for transportation. But progress in the warehousing sector was much less—with the percent of sales ratio falling 1.2%.

More distressing is a 3.7% increase in the administrative cost ratio. Companies have been unable to cut costs since these surveys began. This is one area that needs closer monitoring.

The 4.2% average reduction in the distribution/sales ratio of the past year stemmed from the efforts of only 43% of the surveyed firms. While enough to outweigh the 27% reporting increases and the remaining 30% who noted little change, the numbers seem to suggest that more can be done in this critical area.

CURRENT PRICES

Energy moves prices up

Industrial price increases accelerated a bit last month. But much of the speed-up can be traced to energy which advanced over the latest 30-day period—reversing more than six months of steady decline.

More to the point: Eliminate the energy contribution, and industrial boosts remain pretty much in line with those noted since the beginning of the year.

Coming back to the latest results—the major culprits (aside from the turnaround in energy) are in the basic raw material area—notably metals, chemicals, and paper.

On the metals front new increases were reported for steel mill products, primary aluminum, aluminum shapes, zinc and precious metals. About the only area to back off was copper and brass mill shapes.

As for paper, boosts were noted for fine papers, paperboard, and corrugated containers. And in chemicals, substantial advances hit plastic resins, organic chemicals, and even the more sluggish inorganic chemical sector.

Construction materials are also moving up—sparked by increases in fabricated structural metal, wiring devices and sand and gravel. Gypsum, lumber and plywood (affected by sluggish housing activity) eased off somewhat.

Much more indicative of the underlying rate of inflation were the slow rates of rise in finished goods. Here the increase for the all item index (except food and energy) came to only 0.3%—or about 3.6% at annual rate.

This is also about the rate of advance in capital equipment where only small boosts were reported—most notably in aircraft, printing trade machinery, railroad equipment, and pumps and compressors. Moreover, even these increases were partially offset by some softness in motor vehicles, industrial furnaces, and transformers and power regulators.

A few further words on energy seem to be in order. The latest increase could well prove short-lived—given the problem oil producers are having in curtailing output. Also encouraging on the energy front are new declines in both coal and natural gas.

Upshot: Look behind overall averages—and there is little to suggest any major rise in the general industrial inflation rate.

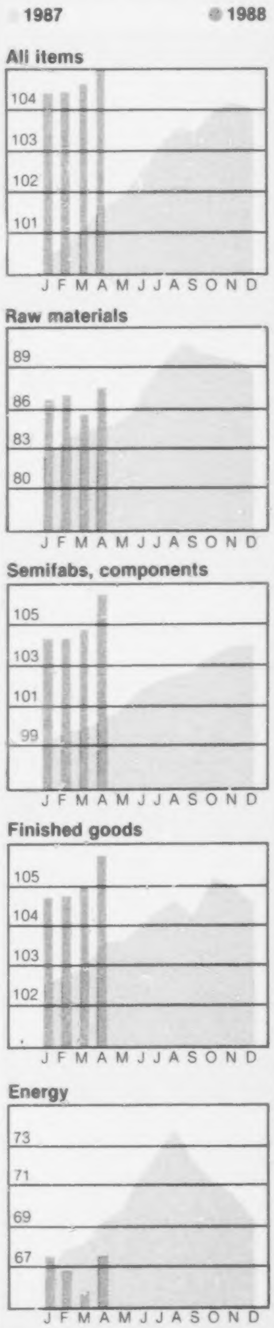
THIS MONTH'S BREAKDOWN

Index: 1982 = 100

	Latest level (April)	% change from: Month ago	Year ago
Bearings	111.2	1.2	3.2
Bolts, nuts, etc.	106.3	1.0	3.2
Chemicals, inorganic	99.5	0.9	5.9
Chemicals, organic	104.4	1.4	11.9
Concrete products	109.9	0.1	0.5
Corrugated cartons	108.1	1.7	NA
Cutting tools, small	107.0	0.0	0.8
Electric lamps (bulbs)	121.9	−0.2	0.9
Electronic components	115.8	−0.2	1.1
Fans and blowers	113.0	0.7	2.2
Foundry and forge products	108.8	0.6	3.3
Fuel oil (residual)	40.5	−4.0	−22.4
Furniture, commercial	123.7	1.0	4.7
Gasoline	56.8	6.0	−2.2
Glass, flat	109.2	−0.1	2.2
Glass containers	112.3	−0.2	−1.3
Gypsum products	113.6	−1.2	−10.7
Hand tools	120.0	0.8	3.8
Hand tools, power driven	111.9	1.2	2.6
Industrial furnaces	118.8	−0.3	3.9
Integrating and measuring instruments	116.3	0.4	2.4
internal combustion engines	110.8	−0.2	1.4
Lubricating oil	103.8	0.1	3.7
Lumber millwork	121.3	0.4	3.8
Material handling equipment	106.8	0.2	2.5
Metal containers	109.7	0.2	−0.1
Metal mill shapes (nonferrous)	125.7	3.0	24.5
Metal tanks	102.9	0.5	6.9
Motors and generators	120.2	0.6	5.0
Motor trucks	122.8	0.1	0.2
Office and store equipment	106.6	0.4	2.4
Paperboard	132.6	4.3	14.1
Paper boxes and shipping containers	121.8	1.2	6.7
Paper office supplies	112.5	−0.4	3.6
Paint	111.0	0.4	3.0
Plastic resins	127.1	2.3	19.6
Precision measuring tools	119.2	0.0	4.9
Pumps and compressors	107.5	0.7	2.5
Refractories	113.4	0.9	3.1
Rubber belts and belting	104.8	0.2	2.1
Scales and balances	106.0	1.0	2.4
Steel products	109.5	1.2	8.4
Switchgear	112.9	0.4	2.4
Textiles, synthetic fibers	96.2	0.7	5.9
Textiles, gray fabrics	113.9	0.6	8.1
Tires and tubes	93.4	0.1	3.1
Transformers and power regulators	108.0	−0.2	1.1
Welding equipment	116.1	0.3	5.1
Wire and cable	124.2	0.1	22.0

Industrial prices

(Index: 1982 = 100)



Source: Bureau of Labor Statistics

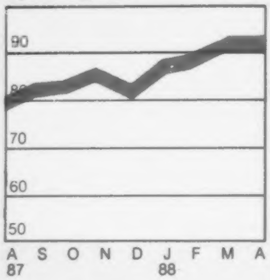
STEEL SCENE

Long leadtimes and shortage fears

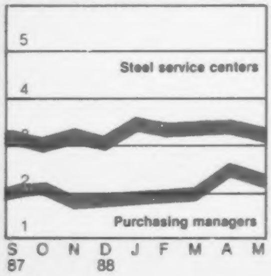
Long leadtimes and fears of shortages continue to dominate the steel procurement scene.

Steel

Operating rates

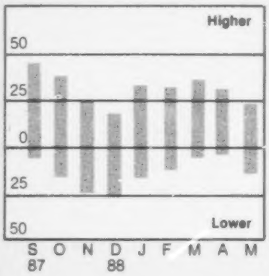


Inventories
(Months supply on hand)

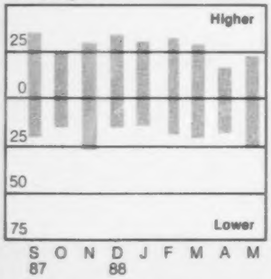


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyers



Lest there be any doubt, take a look at the NAPM Steel Buyer Committee "worry" list. Purchasing managers express concern about nine of the ten product lines monitored.

The biggest concern at this point in time is hot-rolled sheet where 29% of queried buyers fear near-term tightness. Other big problem areas are plate (19%) and cold-rolled sheet (11%).

Only 4% of these buyers say they're keeping a close watch on stainless. Several service centers say long mill leads as well as strong demand have greatly affected their ability to maintain adequate inventory levels—particularly for 60-inch-wide sheet and coiled plate.

These and other distributors responding to the latest Steel Service Center Institute (SSCI) survey are leery of being socked with more price hikes. Specifically, 79% expect increases in their metal replacement costs over the next six months.

But comparison with previous months does seem to suggest that at least a few are beginning to downgrade their price boost estimates. The number expecting decreases has edged up—from 1% last month to 4% at latest report.

Elsewhere, these same distributors remain relatively bullish on demand. More see increases in incoming orders over the next three months (23%) than see decreases (14%).

But there are some signs of possible change. Thus 1) fewer anticipate increases now than a few months back and 2) the gap between those projecting gains and those projecting declines is beginning to narrow.

There is also some concern about a service center inventory buildup. Pointing to this and the significant level of mill activity, SSCI president Andrew G. Sharkey feels that there could be a slowdown in demand for some product categories.

He singles out the steady increase in plate inventories since late 1987—noting that it "raises some interesting questions—especially since we continue to hear reports of long leadtimes and unavailability of certain plate products."

And this worry about future demand could have some validity—judging from what steel buyers are saying these days. Only 26% say they expect to cut back on steel purchases over the next three months.

One reason could be that buyer inventories have been increasing recently. Months' supply is now near 2.1—a substantial 15% advance since late last year.

In another sphere, both buyers and service centers are now in complete agreement that import bargains

Import prices
(Compared to domestic)

Steel buyers

ABOVE 64%
SAME 29%
SLIGHTLY BELOW 7%
SUBSTANTIALLY BELOW 0%

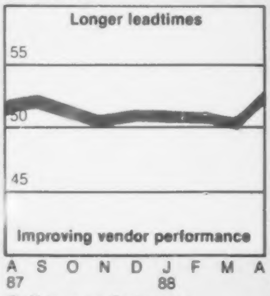
Service centers (carbon)

ABOVE 12%
SAME 88%
5-10% BELOW 0%
10-20% BELOW 0%
OVER 20% BELOW 0%

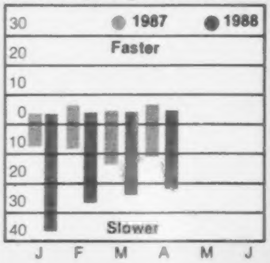
Source: Steel Service Center Institute, NAPM Steel Buyers Committee

Monthly procurement status report

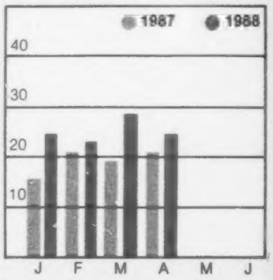
Leadtime index
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance



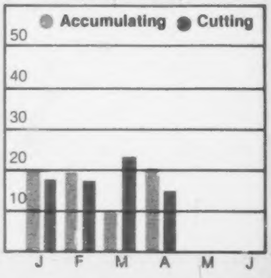
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

have all but disappeared. Only 7% of queried PMs say they are now able to get steel for under U.S. levels—and then the savings is characterized as being only slight.

No wonder that not one purchasing manager expects to increase his dependence on off-shore sources—in marked contrast to the 36% who are now planning on lessened dependence on overseas steel.

Service centers tell much the same story as far as foreign *versus* domestic price comparisons are concerned. Indeed, in the carbon steel area, it's hard to find anyone reporting lower overseas tags. And in stainless, the few (14%) who can still get lower prices put the advantage in the low 6-10% range.

PROCUREMENT STATUS

New index shows stretching leadtimes

This month marks the inauguration of ***Purchasing-World*** magazine's leadtime index (see table).

A word of caution for those who make comparisons with the index readings of earlier this year: The new barometer has purposely been made more sensitive to small changes—so the current 55 level (5 points above the neutral 50 mark) is consistent with the 51-52 readings of the previous few months.

Other index improvements worth noting: 1) an expanded geographical base to include more cities, 2) a much larger sample of respondents, and 3) increased product coverage to include such key office equipment lines as copiers, PC workstations, FAX machines, electronic typewriters, printers and telecommunication equipment.

The new rundown shows the greatest concentration of stretchouts over the past 30 days is in the electronic and metal areas. This is the result of high operating rates and strong demand of these sectors.

The leadtime extensions in these and other areas are also confirmed by the still-large number of items on the NAPM Business Survey Committee short supply list.

A companion NAPM query on speed of delivery shows deterioration—21% report a slowdown *versus* 5% who say things have speeded up.

Those PMs ordering 90 days or more in advance for production materials fell from 29% a month ago to 25% currently. Hand-to-mouth to 30-day ordering increased over the same time span—from 47% to 54%.

LEADTIMES (in weeks)

	Month ago	Latest month
CHEMICALS-PLASTICS		
Adhesives	3	3
Naphthalene	2	2
Paint	4	3
Paint, Coil Coating	3½	3
Paint, Maint.	2	2
Polyester Resin	2	2
Polyethylene Resin	3	4
PVC Resin	4½	5½
Titanium Dioxide	1	1½
ELECTRICAL & ELECTRONIC		
Cables	9½	8½
Circuit Breakers	4½	4
Electromech. Devices	6½	7
ICs (Linear)	6	8½
Motors, Fractional Horsepower	13	14
Motors 1-10 HP	12	13
Motors 10 HP & Up	11	12
Relays	8	8
Transformers	10	10
LUMBER		
Hardwood	2½	2½
Plywood	3	3
Softwood	2	2
Particleboard	3	3
OFFICE PRODUCTS		
Copiers	2	2
PCs Workstations	4	4
Facsimilies	3	3
Pre-printed Form	5	4
Elex Typewriter	3	3
Furniture	3	4
Printers	3	3½
Telecommunications	7	7
PACKAGING		
Bags, Kraft	5	4
Bags, Multiwall	6	6
Cartons, Corrugated	3	2
Cartons, Folding	3	2
Cellophane Wrap	3½	4
Plastic Bags	3	2
Plastic Pkg.	4	4
Shrink Film	3½	3½
Drums, Fiber	2	2
Drums, Steel, Std.	2½	2½
Wood Pallets	3	3
Wirebound Boxes	4½	4½
Strapping	3	2½
PAPER		
Fiberboard	4	4
Glassine	5	5
Groundwood	5	5
Kraft	2	2
Kraft, Bleached	2½	3
Kraft, Natural MFNS	1	1
Laminated	6	6
Tissue	5	5
NONFERROUS METALS		
Aluminum Coil	14	15½
Aluminum Plate	19	21
Aluminum Sheet	14	18
Brass Castings	8	8
Brass Rods	6½	6½
Brass Sheet	8½	8½
Brass Tube	8	8
Copper Fittings	2	2
Copper Mill Prod.	6	6
Copper Tube	4	4
Lead	4	4
Magnesium	3	3
Manganese	8	9
Nickel	3	3
Silicon	1	1
Tin	2	2
Wire, Specialty	4	4
Zinc	3½	3½
MISCELLANEOUS		
Bearings, Domestic	5	5½
Bearings, Foreign	14	16
Fasteners	6½	6
Fasteners, Std.	2½	2
Insulation Mat'l.	7	7
Machined Parts	4	5½
Pipes & Valves	4	4
Rubber, Synthetic	2	2
Rubber Hose	4	4
Tungsten Carbide Parts	14	14
Valves, Cast Steel	4½	5
Welding Supplies	3	2½
STEEL		
Cold-Drawn Bars	4½	3½
Cold-Rolled Sheet	9½	11½
Forgings	10½	11
Galvanized	4	3
Grey Iron Castings	8	9
Hot Rolled Bars	4½	3½
Pipe, Carbon	4	4
Plate	9½	11½
Sheet	14	14
Sheet Castings	6	7½
Structurals	9½	10½
Tubing	6	6

Based on 300 people covering 6 cities, **PW** feels this is a more accurate indicator of conditions.

Ethical practices of industrial purchasers

by Robert L. Janson, senior manager, C.P.M.
Ernst & Whinney, Cleveland, Ohio

Ethical challenges have dramatically increased for purchasing personnel as well as for management in general. This conclusion was reached based on the results of a survey of Ethical Practices in Purchasing conducted in 1987 by Ernst & Whinney in conjunction with NAPM's Center for Advanced Purchasing Studies (CAPS) and cosponsored by ***PurchasingWorld*** magazine. Four major areas were studied, all with revealing answers both on their own and when compared with an earlier 1975 ethical survey also conducted by E&W.

- Management ethical direction has changed in a negative sense in the past 12 years; actually somewhat *less* oral and written practices and *less* input from purchasing personnel regarding the policy. Ethical practices reviews have increased from 45% to 50% of the respondents. Reciprocity, however, is down from 21% to 14% of the companies surveyed.
- Sales representatives' approaches are still a common business practice. In fact, holiday gifts, small appliances and clothing offers have increased. "Backdoor" sales were regretted by 62% of the survey respondents.
- "Buyers" outside of the purchasing department are becoming a serious problem since these individuals are usually not subject to stringent ethical policy. Sixty-one percent report unauthorized buying in their companies and 47% mention that specifications are prepared (by other departr[illegible]) to favor one vendor over a[illegible]. Overall, 44% of POs issued by [illegible]As in health care facilities, educational institutions, and other industries were so tainted. In industry, however, only 27% reported such intrusions.
- Ethical decisions by purchasing personnel have not changed much since 1975. Although golf outings and acceptance of theatre tickets are each down about 40%, the total annual dollar value accepted by purchasing personnel is about the same.

Individual practices

The largest number of survey questions relating to personal practices had to do with acceptance of "favors" from vendors. Respondents were given a list of such "favors" and asked to provide three separate kinds of information. First, they were to indicate which of the listed items were personally acceptable to them if offered by a vendor. "Acceptable" items were defined in the questionnaire as those which did not seem to the respondent to involve an ethical problem.

In order to differentiate between personal and company standards, respondents were instructed to answer this question without regard to their company's policies. They were also asked to specify an upper limit for those items which were personally acceptable only up to a certain dollar value. They were next asked to indicate whether the listed item had ever been "offered" to them by a vendor.

Finally, they were asked to indicate which items they had "actually accepted," and where possible, to give the total yearly value of accepted items. A space was provided for additional unlisted items, but only one respondent listed any additional "favors." Sixty-three percent of the survey group completed this portion of the questionnaire.

The first and third parts of this section—"acceptable" items and items actually "accepted"—were designed to measure the standards and practices of buyers, while the second part—favors "offered"—measured the behavior of vendors. The results of this portion of the questionnaire are summarized below:

Trends in acceptance rate: One significant trend gleaned from the responses was that the number of favors accepted and the annual dollar value (even allowing for inflation) have both increased when Ernst & Whinney's 1975 study is compared with the 1987 survey.

Survey sponsors and mailings: The purpose was to determine current ethical practices and concerns and to compare 1987 statistical results with the earlier 1975 study also conducted by Ernst & Whinney.

Three mailing lists were utilized: ***PurchasingWorld*** magazine's, the Sales and Marketing Executives of Cleveland and the National Association of Educational Buyers. The Sales Association was selected because a number of general managers as well as sales personnel could thus be asked to provide their experiences.

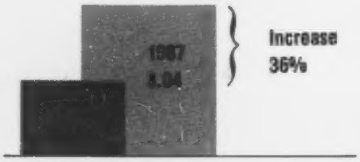
Approximately 1,700 questionnaires were mailed, all selected on a random basis (using every "nth" name on the list) and 236 usable responses were received. This was a 13.9% response rate—good considering that the respondents were asked to provide 102 demographic facts, ethical questions, and answers. Space was also provided for written comments (detail, see examples at end of article).

The survey respondents covered a broad range of purchasing titles; 51% were vice presidents, directors or managers and 20% were purchasing agents or buyers. In addition, 29% other individuals [general management (12%), sales (5%), finance (4%)] also completed this questionnaire. Educational background also varied: 71% had at least a college degree. Forty-three states were represented by the respondents; 41% were from manufacturing companies, 34% from service organizations and the balance were from transportation, mining, financial or other industries.

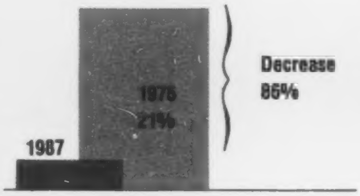
Selected comparisons with other surveys: The 1975 Ernst & Whinney ethical review—the first time anyone had ever studied purchasing ethics in depth—was a regional survey of individuals in Ohio, West Virginia, western Pennsylvania and northern Kentucky. The results encouraged NAPM, and they commissioned the Center for the Study of Ethics in the Profession at Illinois Institute of Technology (IIT) to replicate this survey across the entire United States.

How many accept gifts?

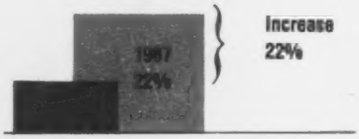
One significant trend gleaned from the responses was that the ***number*** *of gifts accepted and the dollar value (discounting for inflation) have both increased when Ernest & Whinney's 1975 study is compared with the 1987 survey.*



Number of gifts accepted (rate per respondent)



No gifts accepted (% of respondents)



Annual value of gifts accepted (per respondent/Above $1,000)

New 1987 inquiries: Because the purchasing environment has changed dramatically in the 12 years since the original study, a number of new questions were asked in the recent study.

One of these concerned whether the requisitioner (usually the engineering department in manufacturing) is really selecting the vendor. In this regard 47% of the respondents answered "yes" (10%) or "sometimes" (37%) to the question: "Do you believe specifications and/or blue prints are prepared in order to favor one company over another as a sole supplier." A similar tack was taken by asking "Of the total dollars you purchase (issue orders), what percent of these vendor dollars do you personally select?" Fifty-six percent of the respondents indicated that they *do* select the vendors. A further analysis was made of the 44% who *do not* select the vendors, with the result that the following dollar purchases are not selected by purchasing department personnel:

- 27% manufacturing companies
- 46% educational organizations
- 52% health services and hospitals

A third question on this same topic was "Have you been directed by management to use a specific supplier?" Three percent answered "frequently" and 40% "sometimes" to this inquiry. Answers to these three questions seem to confirm a growing trend in purchasing, that is, a much wider group of people in the organizations are making buying decisions. However, their ethical management guidance and standards have yet to be formally studied. There were also numerous suggestions that their ethics are less stringent than purchasing's.

New 1987 questions:

1. *"Do you disclose one vendor's prices to another vendor after award of the contract?"* No—50%; some-

times—36%; regularly—14%

2. *"Do you exaggerate the seriousness of a problem to a supplier in order to get a better price or some other concession?"* Often—3%; sometimes—39%; never—58%

3. *"Do you ask two or more vendors to quote, knowing they will be high, in order to favor another vendor?"* Yes—0%; frequently—4%; sometimes—96%; no—0%

4. *"Is there a maximum value to the gifts your salespeople offer?"* Yes—21%; no—79%. *"If so, please specify?"* $49 average value.

Verbatim comments by the respondents

Here are selected remarks on various highlighted subjects (without editing) by those who participated in the study.

▪ *On special ethical problems in industry*—Too many to elaborate... disclosing bid prices to shop for better prices...too many "good buddy" practices exist...price gouging by vendors in a seller's market, graft by buyers in any market...additional responsibility due to government projects...military contracting sees procurement bribery fairly often on major contracts...

▪ *On company ethics policy*—Absolutely necessary, law department holds seminars to emphasize... some vague value, not enforced... too much is placed on it, much ado about nothing...good policy but difficult to support when other company departments abuse the philosophy...necessary for company protection...a very "common sense" policy especially helpful to new buyers...too restrictive concerning entertainment...inadequate due to faulty language, too broad of scope, not concise enough...sure there is a written policy, but no one has seen it in the purchasing department...a good idea, protects everyone...

▪ *On NAPM "Standards of Conduct"*—Recognized and implemented in all our dealings...am unfamiliar with NAPM standards, you should have included a copy for review and comparison purposes...

▪ *On company "Conflict of Interest" policy*—There are some vague values not enforced...ob-

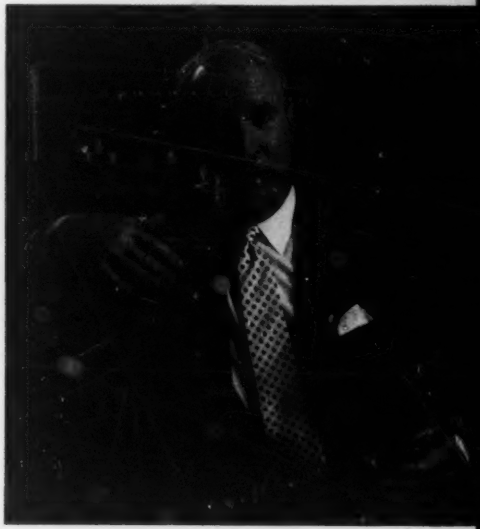
How ethical is purchasing?

Question	Responses 1975 E&W	 1977 IIT	 1987 E&W/PW
• Was purchasing asked to provide input to Ethics Policy? COMMENT: Looks like less concern for user's opinion.	57%		31%
• Have purchasing departments been reviewed for ethical practice? COMMENT: In spite of more ethics awareness, still same amount of "check and balance" attention.	45%	35%	50%
• Does your sales department give gifts? COMMENT: Appears still to be part of business practices.	65%	80%	68%
• Do you practice reciprocity? COMMENT: Decreasing somewhat.	21%	19%	14%
• Do you disclose one vendor's prices to another prior to award of purchase order? COMMENT: Smaller downtrend.	22%	34%	17%
• Do you buy items for employee's personal use? COMMENT: Definitely decreased.	58%		16%
• Do you have different ethical standards when buying overseas? COMMENT: Buyers seem to be accepting two different worldwide standards.		4%	10%
• Do you telephone ("confirming") purchase ordering procedure? COMMENT: More agreements being put into writing on a contract or purchase order.	58%		37%
• Do you have a financial interest in companies you buy from? COMMENT: One strong positive downward trend.	28%		3%

Freebies offered—Who takes them?

				Respondents reported accepted annual values	
Favor	Acceptable (%)	Offered (%)	Was accepted (%)	Average ($)	Range ($)
Advertising souvenirs	85	26	25	39	5 to 200
Lunches	68	83	75	179	10 to 3000
Dinners	48	67	51	197	15 to 1200
Holiday gifts	43	66	26	64	5 to 300
Tickets (sports, theatre, etc.)	37	57	38	89	10 to 500
Golf outings	28	43	25	92	20 to 300
Food & liquor	28	46	30	51	5 to 100
Trips to vendor plants	31	51	30	571	3 to 3000
Discounts on personal purchases	11	24	9	96	15 to 500
Clothing	7	11	6	20	5 to 50
Small value appliances	6	19	7	86	10 to 500
Vacation trips	2	10	2	500	500*
Large appliances	1	4	0.4	—	—
Loans of money	1	3	0	—	—
Automobile	1	2	0.4	—	—

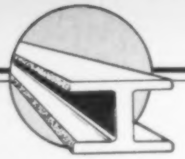
* Note Only 1 response



vious mistrust of employees...no one practices what they preach... poorly enforced...

- *On different sales and purchasing standards*—Sales tends to give more, purchasing remains relatively strict...night and day differences, i.e. double standards...our sales people spend a lot of money and efforts wooing clients...we do not give or receive favors...we give but are not allowed to receive...both should have to abide by same policy, in essence, what is good for the goose is good for the gander...
- *On reciprocity*—Been asked and have refused to ask a vendor to buy our products, both by sales and my direct supervisor, a clear violation...
- *On disclosing one vendor's prices to another vendor*—Back door purchases do exist and I haven't been able to educate them otherwise, management does it too, they don't know it's not ethical...if a vendor is consistently high, we may indicate the approximate differential.
- *On visits to vendor plants at their expense*—My boss and other employees have taken expensive trips.
- *On establishment of formal NAPM disciplining procedure*—Believe companys should handle the situation individually.
- *On business lunches*—We conduct business with certain vendors at lunch...my policy is no lunches unless out of town...frowned upon for purchasing, however engineering and other departments do it...only "dutch treat," same not true for other departments...
- *On different standards overseas*—Providing it does not present an embarrassment to other party... we treat them (and gifts) differently than U.S. firms...much more entertainment was allowed, caused major problem...we try to accommodate foreign customs...
- *On allowing vendors to change a quote after final date*—If they have made a good faith error...only if a change in spec is noted and then all suppliers are open to rebid...if they have a good reason.
- *On exaggerating problems to get better price*—If you get caught in a lie, you will eventually pay for it.
- *On allowing personalities to enter into supplier selection*—Only when the dislike stems from questionable business practices...if it has a bearing on services being provided...if all other factors were equal might be a tie beaker...I've dealt with sales reps I do not like, but they do a good job for the company.
- *On acceptance of "favors"*—I don't believe *true* purchasing professionals can be influenced by gratuities...in 12 years, been offered a gift once and it was refused...I don't believe a buyer can accept any gift without being indebted, "there is no free lunch"...sometimes difficult to be ethical when (others) take with no repercussions..."breaking bread" is a good business act...ethics is a difficult trait with upper management pressures...our policy is to pick up the check but we are not always quick enough...once declined liquor with such perceived vigor I caused salesman more anguish than value of bottle...normal exchange on non-personal items is considered a manner for companies to extend thanks...if someone can be influenced by something of less than $25 in value, they are in wrong profession...no gift should be accepted that would appear to create a bias...problem is that less experienced buyers are beguiled by fast talking salesmen with great "freebies"...stop looking at purchasing and sales, look at top management, they need an ethics course...
- *On overall ethics environment*—Ethics have slipped in past 3 years... times have changed, much less offered these days and once you say no, vendors are smart enough not to offer again, I like the change. **PW**

Editor's Note: The complete report will be available in July and will be published by CAPS.



increased sales to companies moving their operations back to the United States and foreign companies transferring their manufacturing to this country to take advantage of favorable currency exchange rates."

US Steel (USX) is leading the price pack, according to Westergren, and though he's uncertain how long demand levels will stay where they are, he believes there won't be further increases in pricing in the near future.

"We've had justified increases," he says, "but there are competitive mills out there, and you have to be sensitive to that."

Staying competitive

To keep in the hunt, National Steel has increased its cost-effective continuous caster capacity—currently at 92%—aiming for 100% by adding one more continuous casting operation, which will be on-line in 1990. The company, which does about 30% of its business with the automotive industry and some 25% with steel service centers, won't "back off on quality," according to Westergren.

Ladle metallurgy—a process in which the molten steel is checked and tested, and even adjusted *in the ladle* for its properties, to assure that the final product is exactly what the customer wants—is used at all three of National's mills, and customers are free to be on site to do their own quality audits. "We feel good about our customers' audits of us," Westergren says.

National also makes use of EDI technology in the materials management area; eventually that type of electronic access will be available to all the company's customers, according to Pat Butto, coordinator, customer communications. That capability will be expanded into other areas as the industry becomes more sophisticated and able to make use of such information and processes.

Steel is available, but tight. Prices are livable (for the most part) but uncertain. Which of the three WEFA scenarios happens next will be determined in the very near future. ***PW***

REPORT ON STEEL

Who'll win, who'll lose

Traditional foreign steelmakers will be big losers in the domestic market over the period from 1985-1990, according to a study published by Wharton Econometrics Forecasting Associates, Bala Cynwyd, PA.

The new study, titled *Cash or Crash? The Economy and the Steel Industry*, says U.S. specialty steelmakers will be winners in the same time span. "By 1990, steel imports will be down nearly 20% from 1985 levels, with traditional steel exporters such as Japan, West Germany, France and Belgium being hit hardest," said John Jacobson, the consulting firm's director of basic industries and the study's principal author. "Imports from Brazil, South Korea and Taiwan, the newly industrialized countries, will do much better."

Domestically, Jacobson added, specialty steelmakers will expand their volume and share of the market, while mini-mills and integrated steel producers will show declines in tonnage terms, even though they will be regaining market share from imported steel.

Mini-mills, the study points out, will be hard pressed to continue 15 years of aggressive increases in market share because they lack the technology and capital required to continue their past record. Meanwhile, LTV and USX, among the large integrated steelmakers, are expected to post declines in shipments, mainly because of further moves to rationalize capacity.

The area of greatest uncertainty, according to Jacobson, is the other "integrated" sector, where many small mills are subject to closure or extensive restructuring; coastal mills like California Steel Industries and USS-Posco will expand aggressively, however, the study maintains. For more information **Circle 128**

Winners & losers, 1985-90
(% growth in shipments by industry participant)

Participant	1985	1990	% Growth 1985-90
	(million net tons shipped)		
Imports	24.1	20.0	−17
Mini-mills	15.2	14.5	−3
Specialty	3.8	4.1	8
USX	12.9	12.0	−7
LTV	10.7	7.8	−27
Bethlehem	8.8	8.5	−3
Inland	4.7	4.65	−1
Armco	4.4	4.2	−5
National	4.4	4.45	1
Big six	45.9	41.6	−9
Other integrated	8.4	9.3	11
Total integrated	54.3	50.9	−6
(minus exports)	1.0	2.5	250
Total industry Steel demand	96.4	87.0	−10

WHARTON Transportation Report

Freight rates accelerate slightly

by Robert S. Reichard, executive editor

Though tariff increases could be slightly more than those envisioned just three months ago, it still looks like a fairly decent year on the freight rate front.

Analysts at Wharton Econometric Forecasting Associates (WEFA) are now calling for about a 3.9% overall boost this year—roughly a percentage point above previous estimates. Smallest increases will be in water, with the 1988 advance put at only 3.1%.

WEFA analysts, in preparing this regular quarterly run down for ***PurchasingWorld*** magazine readers, emphasize that these increases still have to be regarded as quite moderate given the continuing economic uptrend. They attribute this moderation to four factors: 1) relatively small carrier pay boosts, 2) still low, though increasing, energy costs, 3) overcapacity in some sectors, and 4) healthy intra-and inter-modal competition.

The first three of these moderating forces will become less powerful in the years immediately ahead. Nevertheless, the overall increase projected for 1989 and 1990 (4.7% and 5.6%, respectively) are pretty much in line with the increase in overall industrial prices projected over the same two-year span.

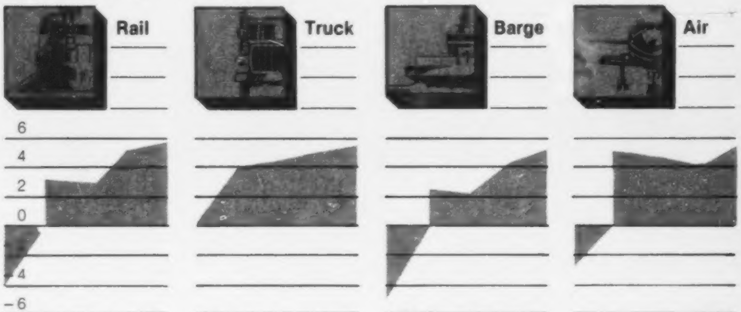
- **Trucking:** Don't expect a repeat of last year when tonnage spurted by nearly 11% as truckers captured share from other modes.

Small rate increases, meantime, have already been posted—namely a 4% boost by several major conferences a few months ago. And another boost may be in the offing to pass along high labor costs stemming from the newly-inked Teamsters contract.

Compensation insurance costs, which could rise as much as 30-40% this year, are also pressuring rates. Behind this bigger-than-industry-average increase is the high risk of trucking accidents—plus the fact that workers can shop between their state of residence, their firm's home state, and the state where the injury occurred to file where the highest benefits are available.

Freight cost outlook by mode

(Percent increase over previous year)



Source: Wharton Econometric Forecasting Associates

Upshot: Trucking rates are forecast to rise 4.2% this year; slightly more than the 4.0% advance of 1987. They'll continue to escalate to 4.8% and 5.6% in 1989 and 1990.

- **Railroads:** Demand won't be quite as robust as last year when the Association of American Railroads reported a 9.3% in ton-miles carried. It would be unrealistic to expect anything like that this year.

Meantime, competition from trucks and intermodal links are helping to keep down rates—with an added cost benefit coming from the growing use of doublestack LTL carriage. In any case, rate rises are forecast at only 3.6% this year which is slightly less than last year. But, there will be some acceleration to 4.7% and 5.6% in 1989 and 1990, respectively.

- **Air cargo:** Another good volume gain is anticipated although it will probably be a bit under the 13%-plus freight increase of last year. Biggest advances are likely after midyear.

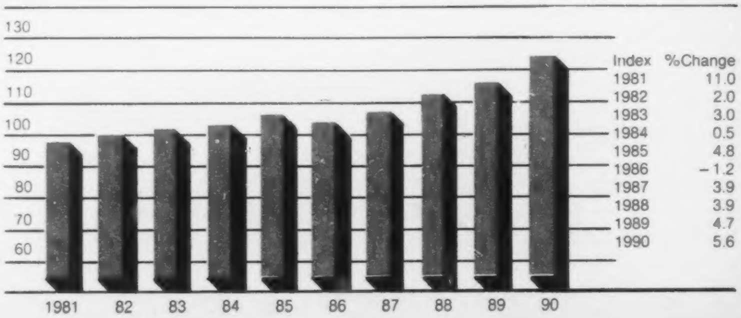
Rate increases, however, will continue to be above average—rising by more than 5% for the second straight year.

- **Water freight:** A continuing (though diminishing) barge surplus will keep a lid on near-term rate increases. This year's 3.1% gain, for example, will be the lowest among all the modes. But, this figure is above the 2.2% estimate made three months ago.

Ocean rates from the U.S. to northern Europe are also scheduled to go up as U.S. exports to this area increase. But rates going the other way, from Europe to the U.S., remain soft. ***PW***

PurchasingWorld freight rate index

(1982 = 100)



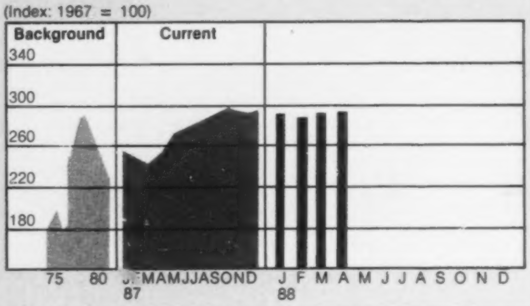
Index	%Change
1981	11.0
1982	2.0
1983	3.0
1984	0.5
1985	4.8
1986	−1.2
1987	3.9
1988	3.9
1989	4.7
1990	5.6

BUSINESS DATATRAK

Raw material price barometer

Latest month 297.2
Month before 292.3
Year ago 253.8

(Index: 1967 = 100)



LATEST SPOT MARKET PRICES

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	16.50
Steel, bars, Pitts., cwt.	16.50	16.50	16.50
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	19.45
Steel, plates, Pitts., cwt.	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	28.15	28.15	26.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	1.080	1.110	.655
Antimony, N.Y., dealer, lb.	1.08	1.09	1.15
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	1.66	1.76	1.33
Brass, yellow, [sheet], lb.	1.61	1.71	1.28
Cadmium, N.Y., dealer, lb.	7.90	8.50	1.20
Copper, electrolytic, wire bars, refd., lb.	1.02	1.12	.69
Copper sheet, over 24 in., lb.	1.74	1.84	1.42
Lead, common, N.Y., lb.	.34	.34	.33
Magnesium, pig ingot, [99.8%], lb.	1.53	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	345.00	345.00	310.00
Molybdenum, oxide, dealer, lb.	3.58	3.70	2.85
Nickel, cathode, dealer, lb.	7.95	8.40	1.92
Platinum, dealer, oz.	517.00	533.00	616.00
Silver, N.Y., oz.	6.37	6.42	8.81
Tin, N.Y., dealer, lb.	3.21	3.19	3.19
Zinc, Prime West, East St. Louis, lb.	.57	.52	.45
Zinc, die casting alloy, No. 3, lb.	.615	.545	.465
PAPER			
Uncoated book #3 offset, ton	920.00	890.00	860.00
Watermarked bond, ton	1070.00	985.00	985.00
Gummed sealing tape, carton	17.33	17.42	16.44
Grocery sacks, ton	455.00	435.00	390.00
Solid bleached paperboard, ton	685.00	650.00	620.00
Kraft linerboard, 42 lb., unbleached, ton	410.00	410.00	350.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.283	.280	.241
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.22	1.22	1.13
Cotton middling, 1", N.Y., lb.	.604	.613	.630
Printcloth, 48", 80x80, N.Y., spot. yd.	.540	.550	.640
Army duck, 37", 13 oz., yd.	1.510	1.510	1.445
Blended printcloth, 64", 78x54, yd.	.66	.72	.97
20s combed yarns	2.00	2.04	1.82
Wool 64s, Staple, lb.	4.50	4.50	2.70
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	100.00	100.00	105.00
Benzene, petroleum, tanks, Houston, gal.	1.03	1.15	2.52
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.685	.685	.910
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.53	.53	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.34	.34	.27
Polyethylene resin, low density liner film grade (market place), lb.	.465	.425	.315
Polypropylene, homopolymer grade (market price), lb.	.515	.495	.370
Polystyrene, general purpose grade (market price), lb.	.580	.580	.470
Polyvinyl chloride, pipe grade (market price), lb.	.400	.400	.325
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.450	.460	.420
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	145.00
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.870	.800	.770
Xylene tanks, gal.	.870	.890	.850
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	327.05	326.30	325.51
Lumber 2x2 pine, mbf, cl	327.15	332.35	324.56
Plywood, plyform, ¾", msf, cl	579.35	579.45	577.50
Plywood, ⅝", msf, cl	414.45	415.40	382.00
Cement, bulk, ton, tl	65.01	64.44	63.50
Sand, ton, cl	7.32	7.32	7.14
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	49.46	49.04	48.53
Crushed stone, 1½", ton, cl	8.47	8.40	8.06
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.93	0.93	0.89
Gypsum sheathing, ½"x1"x8", msf, tl	228.43	229.43	215.25
Brick, common, per thousand, tl	204.91	204.62	186.67
Asphalt paving, AC-20	129.30	131.99	125.02
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.58	7.57	7.08
FUELS			
Crude oil (W. Tex Int Cush), bbl.	17.50	18.10	19.40
Diesel (reseller rack, Chi), gal.	.505	.538	N.A.
Fuel oil No. 2 (N.Y.), gal.	.515	.508	.520
Fuel oil No. 2 (Gulf spot), gal.	.465	.480	N.A.
Fuel oil No. 6 (N.Y.) contract cargo, bbl.	16.50	15.50	N.A.
Gasoline (reg lded NY), gal.	.541	.533	.554
Gasoline (reg unlded NY), gal.	.529	.520	.542
Kerosene (reseller rack, Chi), gal.	.554	.590	N.A.
Propane (Mt. Belviu, Tex), gal.	.245	.245	.240
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	108.00	113.00	80.00
Steel, No. 1 hvy., dlvd., Chi., ton	111.00	117.00	73.00
Copper. No. 1, East, wholesale buy, dlvd., lb.	.890	.925	.625
Copper, No. 2, East, wholesale buy, dlvd., lb.	.795	.845	.545
Brass, red, East, wholesale buy, dlvd., lb.	.850	.885	.585
Brass, yellow, East, wholesale buy, dlvd., lb.	.425	.425	.345
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.620	.695	.415
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.705	.785	.455
Zinc, old, East, wholesale buy, dlvd., lb.	.240	.240	.200
Lead, clean solids, East, wholesale buy, dlvd., lb.	.210	.205	.215
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	20.00	25.00	40.00
Paper, old corrug. box, dlr., N.Y., ton	5.00	10.00	15.00
Osnaburg cuttings, dlr., f.o.b. N.Y., lb.	.12	.12	.12
White wipers, No. 1, dlr. buy, f.o.b. N.Y., lb.	.33	.30	.23

[Sources: Metals Week, American Metal Market, Engineering News-Record (20-city averages), Wall Street Journal, Journal of Commerce, Chemical Marketing Reporter.]

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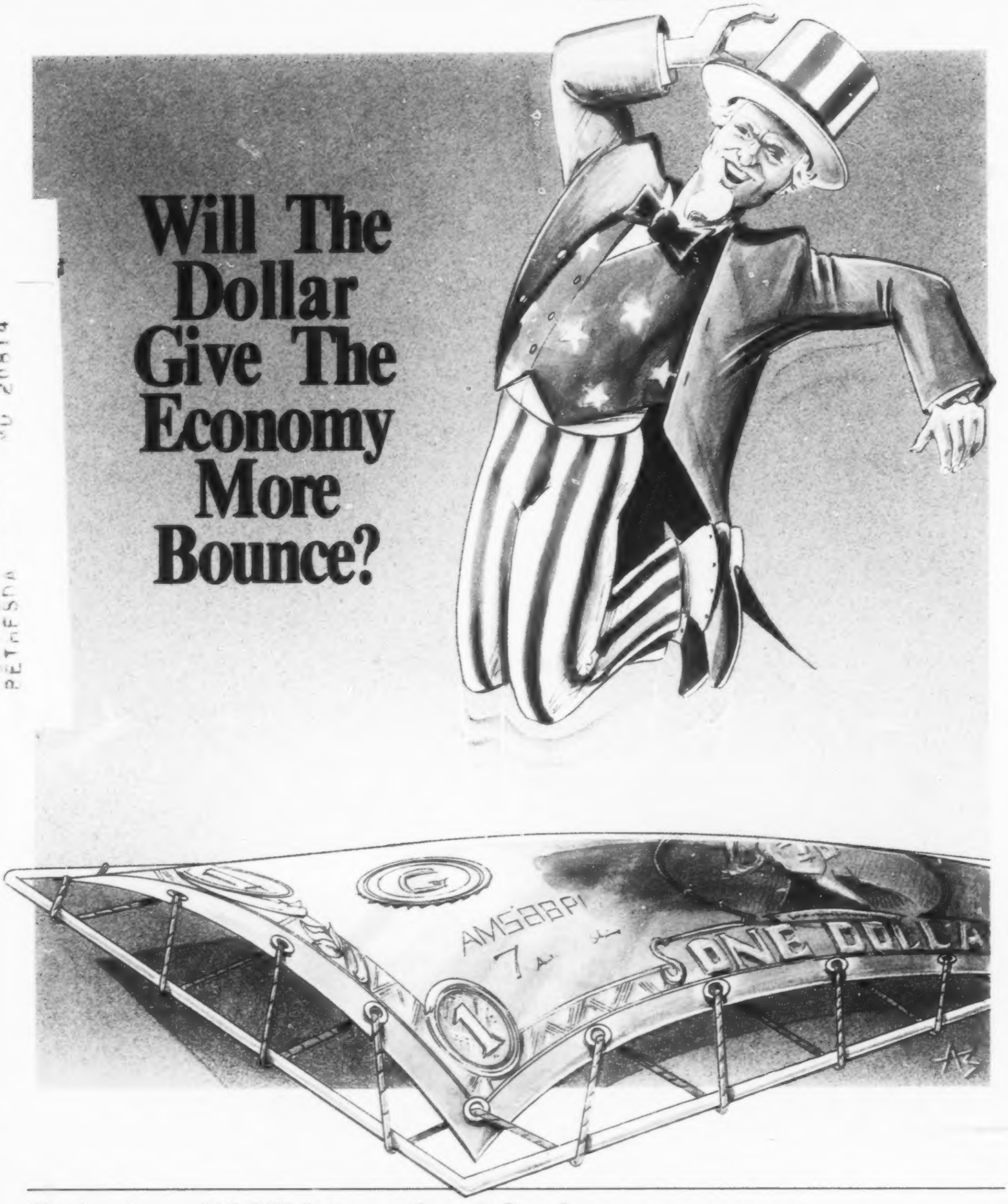
Will The Dollar Give The Economy More Bounce?



Exclusive—NAPM International Conference coverage

Seven tips for fax buyers

Value analysis—cost reduction's final frontier

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Record attendance at this year's NAPM Annual Conference in Nashville was bolstered by the full slate of educational seminars offered to attendees—and by the promise of Southern hospitality. Attendees got both.

PW's forecasting team has revised predictions to a brighter finish for 1988, based on first half results.
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NAPM's 73rd annual conference was in Nashville, and covered a wide range of issues.
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Materials are often the last frontier in cost reduction. Many companies hesitate to put value analysis techniques to work to get those costs down. This common-sense approach could help you make VA a major line of defense against rising materials costs.

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How's your knowledge of legal-ese? As a purchasing professional, you know how directly legal issues impact your business. It's time to test your skills with this quiz on real-life situations.

PurchasingWorld

Dumping charges may be filed against Japanese valve makers

U.S. valve manufacturers have charged that the Japanese are dumping stainless-steel gate, globe and check valves in the U. S. market. Dr. Malcolm E. O'Hagain, president of the Valve Manufacturers Association of America (VMA) says, "We have developed data showing significant margins of Japanese dumping, giving them an unfair advantage in domestic markets. We are gathering additional data to determine whether to pursue an antidumping case, and the Commerce Department has been provided with information for their review."

If charges of dumping are filed with the International Trade Commission, and if they are proven out, imports of valves from Japan could be subject to additional duties for collection by the Customs Bureau. U.S. valve manufacturers claim that the Japanese have been dumping their products in the U.S. market with dumping margins of as much as 100%.

IC sources revealed in IC D.A.T.A. Digest™

Looking for multiple manufacturer sources of digital, linear, interface, microprocessor, and memory ICs, and hi-rel/military electronic components? That data plus replacement information, alternate sources, technical specs, and discontinued devices, is included in the recently reformatted IC Digest series from D.A.T.A. Business Publishing™.

The logical information path in this redesigned IC reference source series leads the purchasing practitioner easily from one section to another of the various digests. Magnetic tape and printed versions are available. **Circle 264**

Book offers guide to understanding brokers

How to reap savings in transportation dollars, with lower rates for shippers, and cutting deadhead miles for carriers, is outlined in the *Guide to Understanding Brokering* published by the Carrier Information Exchange. The publication is designed for both shippers and carriers who seek greater transportation efficiencies through the use of third parties.

The guide describes the bid-ask world that brokers create, the best ways to qualify and work with a broker, tips on how to maximize savings thru negotiation, recourse on claims, and how to prosecute a bad broker. It is sold for $39.95. **Circle 265**

How to eliminate that pain in the back

Stress-relieving items for office use, specifically designed to reduce worker fatigue and absenteeism associated with stress and strain, are featured in the WorkRite Products catalog from BackSaver Products Co. These products consist of an adjustable footrest, desktop slope, and posture-correcting seat cushion.

The BackSaver Footmate adjustable footrest can easily fit under a desk or work station. The footrest flexes with ankle movements to relax back muscles. The desktop slope reduces back stress which occurs when one constantly bends over a desk.

A 30-day money back guarantee applies to all items from the catalog. **Circle 266**

Add another MRO source to your list of specialist firms

Industrial fuses, and only industrial fuses, are stocked by ActionFuse, an electrical distributor specializing in domestic and hard-to-find foreign types. The company also offers technical guidance for specific applications.

The firm stocks more than 1,000 different types of fuses from the most widely accepted manufacturers. They can process orders on the day of receipt and express shipments are available in emergency situations. **Circle 262**

Holiday greeting card catalog is offered

Though the Holidays are still many days away it's time to start ordering greeting cards for business use. V.W. Eimicke Associates, Inc., is offering a special expanded collection featuring a distinctive range of designs, from reproductions of American scenes by Currier & Ives to whimsical Santas.

All are reproduced with quality papers, inks, silver and gold-leaf embossing. Cards may be imprinted with a company name. For a free catalog **Circle 263**

Contract electronic manufacturing services

Full service contract manufacturing including conceptual product development, design and engineering, material sourcing, manufacturing, assembly, testing and quality controls, are available from Kimball Electronics. A free brochure describes the firm's capabilities, which include: printed circuit boards; printed circuit assemblies; metal

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Lid on prices still holding firmly

Things don't look bad on the price front—despite expectations of continuing business gains into 1989.

Prices are moving up faster than in 1986 and 1987, but the rate is still moderate—except for a few shortage-plagued basic raw materials.

Most observers remain relatively optimistic about containing further advances. The evidence here culled from *PurchasingWorld* magazine's midyear economic outlook report is fairly conclusive.

PurchasingWorld readers put their projected overall 1988 procurement cost increases at 5%. The NAPM Business Survey Committee estimate is only a bit higher at 5.8%. As pointed out in the story on page, much of this NAPM predicted increase may already have taken place. Another encouraging NAPM finding: Increases are expected to be selective and modest.

PurchasingWorld's economic consultant Dr. Roger Williams is betting on a slightly higher 6% increase this year. But this is counterbalanced by the 4% increase in industrial producer prices being projected by the Wharton and DRI econometric models.

Suppliers are forecasting only a 4.1% overall advance in the prices of the goods they sell. That's not to say that everything is coming up roses. The weaker dollar has been boosting import prices.

The upward adjustments in overall price forecasts have been rather moderate—nothing that would suggest a runaway spiral.

Some concern has also been voiced about supply-demand pressure on prices—as operating rates rise. In cases where utilization has moved into the 90% range (as in some key raw material areas) prices have moved up smartly.

But sky-high levels are more the exception than the rule. The current overall factory operating rate is still a few percentage points under the 85% level that traditionally signals a sellers' market.

Talk about rising labor costs should also be taken with a grain of salt. Point to remember: There has been little acceleration in wage increase levels. This is in sharp contrast to previous periods of relatively low unemployment when pay rates moved up sharply.

Why the difference this time around? Much can be traced to reduced worker bargaining clout. Both the Teamsters and automotive unions have recently inked pacts that actually call for lower wage raises than they received in 1985 when their last contracts were negotiated.

And don't underestimate today's still-strong competition which persists despite closer supply-demand balance. Even with reduced availability, auto companies and other large buyers are able to limit vendor increases in steel and other key areas.

Energy news is good

There's more good news on the energy front. Prices for most products this year will generally average below 1987 levels (see chart).

The good news is all based on the assumption that OPEC will still be unable to get its act together. Result: Imported crude oil, the prime energy price determinant, will creep up to $18/barrel by late 1988.

Here's a more detailed product-by-product rundown:

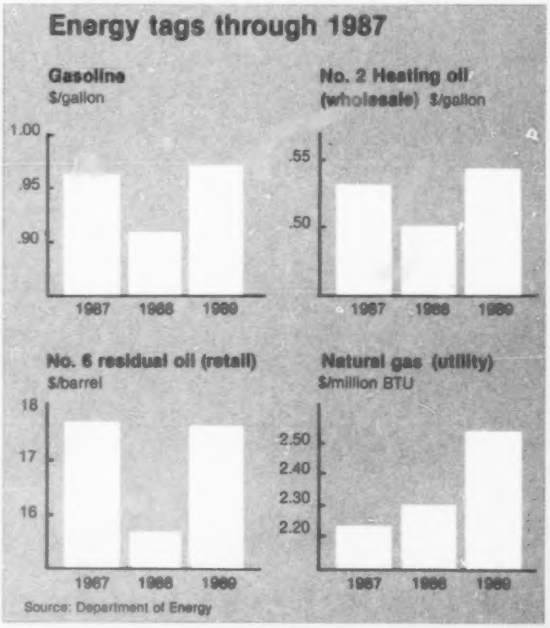
Gasoline: The all-grade average this summer should hover in the 90¢/gallon range. But the trend will be up after that, with tags approaching the $1/gallon level during the summer of 1989.

Heating oil: A drop to 48¢/gallon (wholesale) is expected this summer as demand slackens seasonally. Subsequent advances should be moderate, with 55¢/gallon expected to be the highpoint during next winter's heating season.

Residual fuel: A modest increase in retail price (all grades) is anticipated from the $14.70/barrel low of early 1988. By winter, averages could be near $18/barrel. Little change is seen after that except for normal seasonal variations.

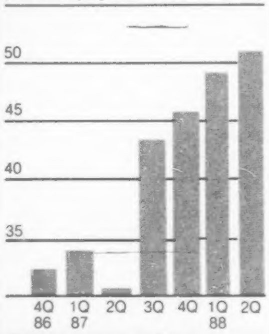
Natural gas: After falling 4.7% in 1987, residential quotes should rise 2.0% this year and by another 4.9% in 1989. Electric utilities prices (off 32% in 1986 and another 4.4% last year) should rise 2.7% in 1988 and nearly 10% in 1989.

Electricity: Residential rates will fall fractionally (0.3%) this year—as fossil fuel costs (notably coal and oil) decline. In 1989 these costs, especially for natural gas, should rise, making for a 3% overall rate of advance.



Energy tags through 1987

Source: Department of Energy



Polypropylene

(¢/lb homopolymer transaction price)

Polypropylene capacity coming on line

Another few cents is being added to the going price—with the homopolymer grade now selling for well over 50¢/lb. On the other hand, supplies should soon begin to increase, suggesting that future advances will be somewhat harder to come by. There are already reports of competitive jockeying in anticipation of new second half 1988 capacity increases by Advanced Global Polymers, Aristech, Exxon, Fina, Himont and Quantum. And next year Eastman, Exxon, Himont and Soltex will add still more to the supply. All in all, more than 20% additional potential should be coming onstream over the 1988-89 period.

Moderate steel increases

Price increases remain surprisingly moderate—despite strong demand, relatively high operating rates and extended delivery times. Wharton Econometrics puts the second quarter composite price (transaction basis) at around $516/ton, up only 3% compared to the previous three-month period. More important, increases over the rest of the year are expected to be even less bothersome—with averages moving up just about 1% over this period. One reason: Demand should begin to fall off as second half shipments drop to 37.5 million tons compared to the 42 million shipped during the first six months.

Paper advances are about over

Recycled boxboard tags have just moved up 6-8%. But for the second half of the year, little further advance is seen for major grades as the industry digests first half increases which for the most part have averaged in the 7-8% range. The two exceptions: 1) market pulp, which could rise slightly in the third quarter, and 2) corrugated cartons, which will continue to edge up toward the $410/ton linerboard equivalent.

Aluminum prices don't slow demand

Current aluminum demand remains brisk—despite continuing price advances. On the latter score, market ingot is now commanding upwards of $1.30/lb, with most fabricated items also being adjusted upward . Mill prices for Series 3000 and 5000 common alloy sheet and coil, for example, have jumped 40-50¢/lb over the past year. As for demand, one U.S. producer puts the

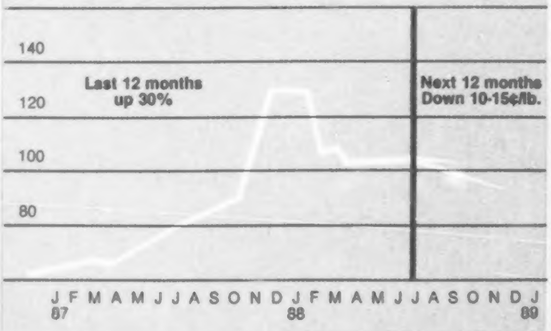
Ever so slowly, copper prices should fall below $1/lb

CURRENT SITUATION: Prices are holding up well despite the onset of the summer slowdown. Averages remain well under the $1.40/lb peak at the beginning of the year, but they're still quite high—about 30% above 1987 levels. **Scattered labor woes here and in Peru, tight supplies and the recent runup in aluminum and other metals are all contributing to current strength.**

DEMAND: Near-term gains should be harder to come by, primarily because of slower housing activity. There are already signs of easing as copper and brass service center shipments tail off after peak 1Q 1988 levels. Nevertheless, the fast start this year suggests that U.S. domestic copper consumption will rack up a respectable 2% advance. Longer term, some increase in consumption for autos is possible because of more wiring for electronic components. But aluminum radiators could offset much of the gain. Annual consumption gains should lag 30% behind GNP. Implication: A 3% increase in real GNP should spur a 2% copper advance.

SUPPLY: Lingering global tightness is confirmed by stocks which still remain under the normal 5-6 week level. But free-world production is targeted to rise by 5-6% this year (to 6.8 million metric tons). Much of the growth will be in the U.S. where mine output should be up by 10% (to 1.4 million metric tons). More output is on the way from Chile where a 16-20% jump in supply is seen over the 1989-1992 period.

PRICE OUTLOOK: The improving supply projection suggests a gradual price decline. And while tags shouldn't fall through the floor, a 90-95¢/lb quote seems probable by year-end. **For 1989, tags below 80¢/lb are likely.** Costs would also seem to indicate some leeway for future price declines. One big U.S. producer's production costs were recently estimated at just 55¢/lb.



Producer copper price

Cents/lb.

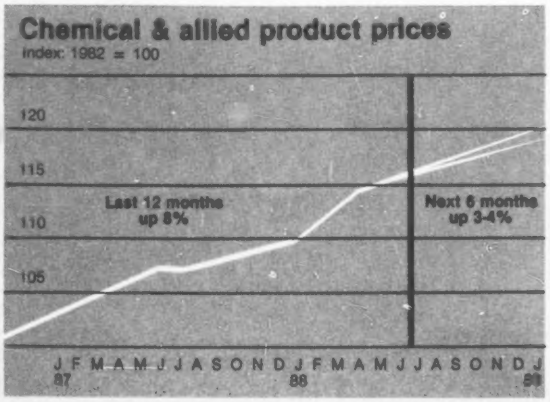
It's still a seller's market in chemicals

CURRENT SITUATION: Prices, sparked by continuing advances in industrial chemicals and plastic resins, continue to edge up. At latest report averages were running 8% ahead of 1987 levels—with modest price increases scheduled for the 3Q. **Other signs of a sellers' market: High operating rates, low stock/sales ratios, and booming demand.** Industrial production is now also 8% above the 1987 reading. Strong exports are also helping buoy the market.

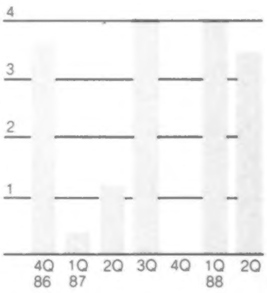
DEMAND: Gains should continue at a lower rate than the first half. Output for 1988 should be up 5-6%. But there could be some sector-by-sector variation. **Eight percent gains are seen for organic chemicals and plastic resins.** And a double-digit advance is possible for agricultural chemicals. Basic chemicals (chlor-alkalis, industrial gases, pigments, and other in organics) will advance only slightly.

SUPPLY: Scattered tightness persists—as demand in some sectors presses up against capacity restraints. Operating rates are averaging near 85%—4% above early 1987 levels—or higher. Thus many plastic resins, titanium dioxide, ethylene, and chlorine are all operating at or near capacity. But relief is on the way—the industry is expected to boost its plant and equipment spending by nearly 20% this year—enough to add 5% onto overall industry capacity in 1988 and another 2-3% in 1989.

PRICE OUTLOOK: Despite just-posted hikes, the overall rate of increase should be slowing. Reasons: Decelerating demand gains, better market balance, and a gradual flattening out in petrochemical feedstock costs. **Another 3-4% add-on to industry averages can't be ruled out by early 1989.** For 1988, year-to-year increases should shape up as follows: basic inorganics (7-8%), basic organics (12-13%), plastic resins (16-20%), paint (4-5%), agricultural chemicals (10-11%), and drugs and pharmaceuticals (5%).


Chemical & allied product prices
index: 1982 = 100

year's domestic shipment total at near 16.5 billion pounds—up 2-3% and a new all-time high. But while things are fairly snug now, relief is on the way, with about 600,000 tons of new potential expected to hit the market this year alone.


Capital equipment
(% increase at annual rate)

Machinery prices inch up

Prices aren't increasing all that much—despite rising demand and a softer dollar. Latest government readings suggest that overall capital equipment tags are running less than 2% ahead of year-earlier levels. Also worth noting: 1) vendors responding to a new survey put the increase in 1988 non-electrical machinery at only a bit more than 1%, and 2) much of the recent hikes in Japanese machine tool lists are being offset by significantly higher discounts.

Zinc prices jump

The plating and alloying metal is taking off, with prices jumping up into the low 60s range—more than 40% above levels prevailing as recently as spring 1987. Behind the increase is a combination of factors including low inventories, higher-than-expected demand, Russian and Chinese buying, fears of strikes, and generally tight supplies. This latter tightness is likely to persist, too, with Free world production expected to remain unchanged in 1988 at last year's 5.22 million ton level—not nearly enough to prevent a global shortfall for the seventh straight year.

Semiconductor demand still strong

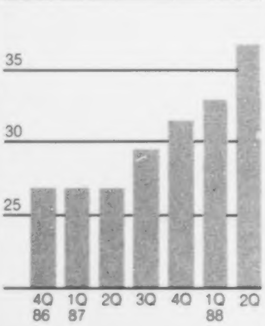
Demand is booming—with dollar totals expected to rise as much as 20-30% this year. Not surprising, sellers are calling most of the signals—especially in the memories area where 256K DRAMs have moved up as much as 50% since early 1988. And some 64K EPROMs have jumped over 30% over the same period. Also advancing are linear ICs and MOS logics which were both, at latest report, running some 5-6% ahead of 1987 averages.

Fax machines still sizzle

The market continues to sizzle, with sales expected to jump an eye-opening 63% this year—to 950,000 units. Prices, meantime, are coming down. Compare estimated dollar and unit projections made by the Computer and Business Manufacturers Association (CBEMA), and an average price of $2,300 is indicated, some 8% under last year's level. Coming back to the demand, a CBEMA spokesman observes, "The market is reaching critical mass. Once there's a substantial installed base of fax machines, businesses have more incentive to buy them, since they can communicate more broadly."

Phthalic anhydride

(molten)



Feedstock supply remains snug

Supplies of phthalic anhydride (for plasticizers, polyester resins and alkyd resins) are likely to remain snug through the rest of 1988. Reason: Producers are temporarily shutting down plants for badly-needed maintenance. But there should be enough to go around as export sales are curtailed. Prices, meantime, are firming, with the second increase of the year scheduled for this month.

Lead stays firm

Prices look to remain relatively firm—not even the recent demand pause made for any significant easiness, as prices remain in the high 35¢/lb-plus range. The approach of the battery-buying season could actually make for another few cents increase by late summer or early fall. On the other hand, some correction is likely by next year as more production begins to hit the market. Prices at that time are expected to remain well above the 26¢/lb low of early 1987.

Ethylene tags continue up

Tight supplies have pushed contract tabs up by more than 50% since the beginning of 1988. And compared to last summer, the advance is near 100%. Nor is the end in sight, with a cent or so expected to be added onto the price in each of the next three months, bringing the September quote up into the low-to-mid-30s range. Blame it on recent production interruptions which, in turn, have put some polyethylene customers on allocation and forced new resin boosts.

Nickel runup is over

The big 1988 runup in prices is over as supply interruptions and fears of new strikes fade. Over the past few months more than $1 has been shaved off dealer quotes—and a similar drop is likely during the summer months. Even so, don't expect tags to drop anywhere near the early-in-the-year $1.70/lb level. Reason: Despite an improving supply situation, Free world output this year will hit only 560,000 pounds.

Extra costs of offshore buying

Overseas bargains can often prove to be more illusory than real, according to a new study by Quick, Finan and Associates. The report points out that buying offshore generally entails extra costs overlooked when the contract is awarded.

The study's conclusions, based on interviews with National Tooling and Machining Association members and their suppliers, are equally applicable to the purchase of many customized component parts, according to author Perry Quick.

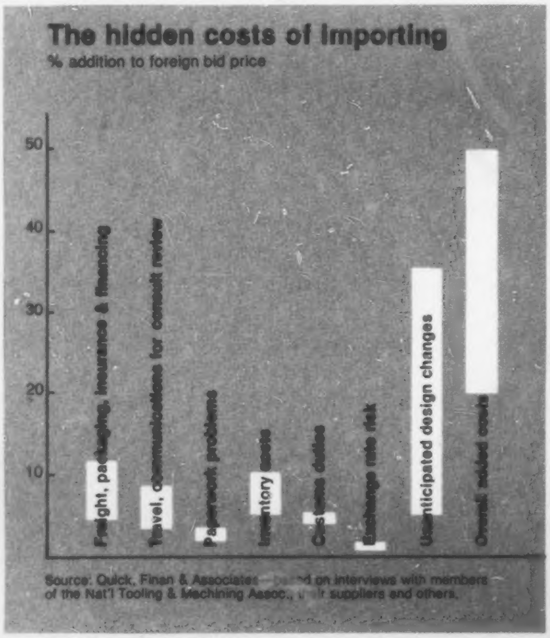
Quick adds that these are generally products where quality and delivery are of prime importance. Some of the examples he cites: Jigs and small dies for electronics manufacturers and small mechanical castings and machined parts in autos.

In any case, the new report estimates that extras tacked onto these kind of products frequently increase the overall cost by 30-40%—with some advances of near 50% not all that uncommon.

As indicated in the accompanying chart, there are several of these extras that bear close watching. For example, customs duties (when not included in the foreign price quote) generally offset 4-6 percentage points of the nominal price advantage. Packaging, freight, insurance, different financing terms, and exchange rate risk can narrow the foreign advantage by another 5-15%.

Similarly the added costs for bringing foreign products in line with U.S. standards can offset an additional 5-35% of the nominal price difference.

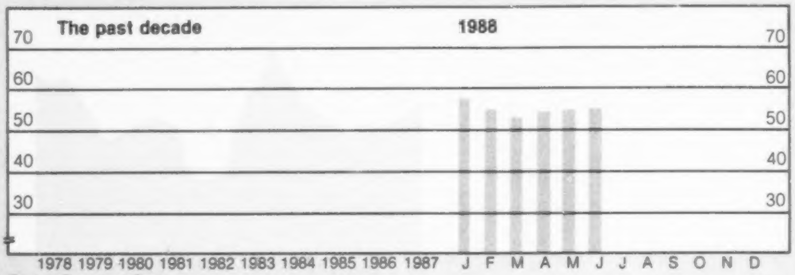
The study also finds a seeming 42% Japanese price advantage dwindling to near nothing after adding hidden costs detailed above.



Source: Quick, Finan & Associates — based on interviews with members of the Nat'l Tooling & Machining Assoc., their suppliers and others.

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Exports help keep economy expanding

Moderate economic expansion into early fall now seems virtually assured as leading indicators published by Uncle Sam and the NAPM Business Survey Committee continue to signal new gains.

The NAPM yardstick (currently in at 55.1—more than 5 points above the neutral 50 mark) is right in line with year-to-date averages. And if this holds for the remainder of the year, NAPM spokesmen say it would be consistent with a 3.4% real GNP growth figure.

One factor behind this buoyancy: Renewed interest in capital goods buying. As shown in the chart on the right, non-defense orders for machinery and equipment are running about 10% above 1987 levels.

And this trend is likely to persist. The latest plant and equipment surveys point to a similar 10% increase in capital investment this year—nearly double the 6% increase projected just six months ago for 1988.

Zero in on the machine tool segment of this industry and the gains are even more impressive. In one recent month, figures for new tool orders doubled from 1987 levels. More important, there is a good stream of inquiries about additional machines.

Exports seem to be another important economic prop these days. Thus 35% of NAPM respondents say their firms are currently experiencing an increase in orders from overseas firms.

The prime mover here is the softer dollar which has helped make our goods more competitive in world markets. Big export gains are noted in paper, chemicals and machinery.

All this, in turn, is showing up in improved balance of trade figures. Note from the accompanying chart that net real imports have been slowly falling—to the point where they are now more than 25% under 1986.

This means a shift of $40 billion—enough to contribute significantly to recent GNP advances. Moreover, it's one key reason behind current robust increases in industrial production.

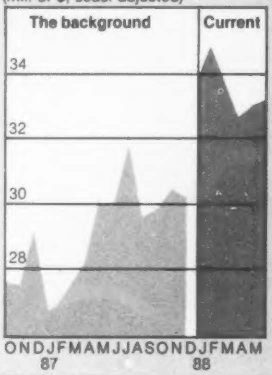
And more balance of trade improvement may be in the cards. One Federal Reserve official is now predicting another $50 billion shrinkage in the real trade deficit by the end of next year. This would bring the red ink figure down to $70 billion—a far cry from the recent $161 billion all-time high.

Consumers also seem to be holding up their part of the GNP spending stream. And again, the prognosis is for more of the same into the second half as consumer confidence—as measured by the Conference Board—hovers near an 18-year high.

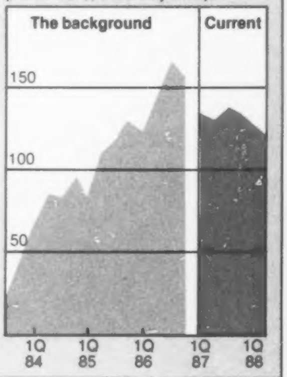
About the only weak spot on the consumer front is housing where only 3% of queried buyers now plan on the purchase of a home over the next six months (off from the previous 3.5% reading). But all this is offset by an improvement in plans to buy cars and big-ticket appliances.

Leading indicators

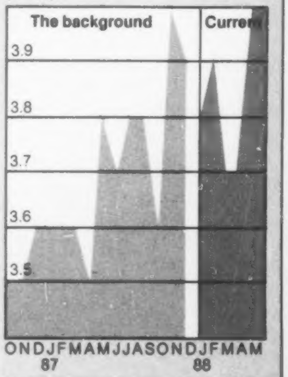
1. Nondefense capital goods orders
(mil. of $, seas. adjusted)



2. Net real imports
(bil. of '82 $, seas. adjusted)



3. Overtime hours
(hours)



Still another important plus: The increase in overtime hours (see chart). This is a pretty strong indicator that top management is under increasing pressure to beef up output.

The high overtime rate also suggests that more new jobs may soon be created. It's not surprising that a new Dun & Bradstreet survey of 5,000 companies estimates that 2.4 million new jobs may be created this year—almost as many as the three million added in 1987, and a pretty healthy number for an expansion nearing its sixth birthday.

Fleet cars held longer and driven farther

No surprise in today's cost-conscious environment: Fleet cars are being held longer and driven more intensively. Here are the latest findings, based on a new National Association of Fleet Administrators (NAFA) survey of 185 U.S. commercial fleets involving nearly 184,000 vehicles:

- **Car age:** The typical vehicle is being held 32 months—up a full month from a year ago and up three months from 1987 levels.
- **Mileage:** The average car is now being driven 64,356 miles before trade-in. That's up more than 3,000 miles from two years earlier and close to 8,500 miles more than the figure reported in 1984.
- **Disposal method:** Auto auctions are used most often (35% of the time) with sales to employees (27%) and wholesale disposal (20%) not too far behind. Only 9% of the NAFA respondents use new or used car dealers.
- **Selling prices:** Fleets rely most often on the Automotive Market Report when determining prices of vehicles sold to employees. Other popular options (in descending order of preference): NADA wholesale prices, company book value, leasing company adjustments, Black Book and Blue Book.

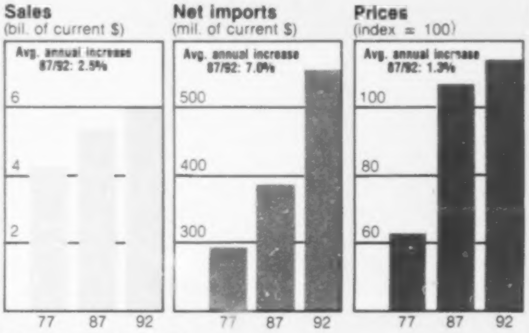
The new study also looks at public utility and U.S. government fleets. The key findings here: Those cars are used even more intensively. Typical public utility and U.S. government cars are held 75 and 60 months, respectively. And on the mileage front, figures top 85,000 miles for both types of fleets (about 32-34% above the figure noted for their commercial fleet counterparts).

Forging imports up, prices steadying

Increasing import competition and restrained price boosts lie ahead for the $5 billion U.S. forgings industry. Analysts at the Freedonia Group see net imports rising at a hefty 7% annual rate over the next few years. The Cleveland-based research firm predicts that by 1992, incoming shipments will account for 10.2% of the domestic market—up nearly 2.5% from 1987.

Price increases are expected to average 1.3% a year into the early 1990s. That's a lot better than the 5.8% annual increase recorded over the past decade. Relatively sluggish demand and import competition are probably behind this low inflation forecast.

Forging trends into 1992



Source: The Freedonia Group

On the demand front, Freedonia analysts project that real consumption will rise by less than 1.5% annually. Some of the factors behind this disappointing trend: 1) slow-growing or declining end-use industries, 2) downsizing of motor vehicles, and 3) competition from castings, plastics and ceramics.

Nonferrous forgings will do better than their ferrous counterparts thanks to strength in the aircraft/aerospace sector. But despite this faster growth (3.2% a year), nonferrous forgings will still comprise only 27% of the market by 1992.

The study also points out that the captive production is relatively minor (17% of domestic shipments) and thus the industry is not highly concentrated. The four largest companies—Alcoa, Ladish, GM and Wyman Gordan account for only 22% of shipments.

CURRENT PRICES

Price rise still slow

Chalk up another month of slow rise in overall industrial prices. While averages have moved up 0.5% over the past month, if you remove a 1.3% increase in energy tabs, the overall gain drops to 0.3%—close to advances of the previous few months.

The latest energy boosts were broadly based, with increases reported for home heating oil, gasoline, jet fuel, residual oil, diesel fuel, and crude petroleum. About the only weak spot was natural gas, where prices dropped considerably.

But other energy sectors may also be ready to flatten out, if OPECs problems in setting new production quotas are any indication. Best bet: Relatively unchanged tags—except for seasonal variations—through early fall.

Elsewhere, the upward pressure is most notable in chemicals and allied products. Organic chemicals moved up another 0.5%—bringing averages 10% above 1987 levels. Inorganics are also rising at a relatively fast clip—up 6% over the same 12-month period.

But even these pale when compared to plastic resins, where a 2% jump over the latest 30-day period has brought quotes more than 21% above a year ago. New postings suggest another advance when next month's price numbers are released.

Metals also inched up over the past month—led by aluminum, zinc and steel mill products. But the latter should begin to level off—some declines are possible in aluminum and copper as new supplies begin to come on stream.

Equipment prices have also been edging up. But discounts can still be had in such key sectors as Japanese machine tools. A new Commerce Department forecast indicates little or no change in overall plant and equipment prices for the year.

Construction material increases also seem manageable. Indeed, gypsum, wire and cable have come down a bit.

Paper, too, may have seen most of its 1988 increases. Corrugated cartons are still inching up—but most other lines are now busy digesting big first half hikes.

THIS MONTH'S BREAKDOWN

Index: 1982 = 100

	Latest level (May)	% change from: Month ago	Year ago
Bearings	113.4	0.4	2.5
Bolts, nuts, etc	106.6	0.3	3.4
Chemicals, inorganic	99.8	0.3	6.4
Chemicals, organic	104.9	0.5	10.4
Concrete products	109.9	0.0	0.5
Corrugated cartons	110.3	2.0	NA
Cutting tools, small	107.0	0.0	0.7
Electric lamps (bulbs)	121.9	0.0	0.9
Electronic components	116.3	0.4	1.5
Fans and blowers	113.4	0.4	2.5
Foundry and forge products	109.1	0.3	3.7
Fuel oil (residual)	42.6	5.2	−21.3
Furniture, commercial	123.6	−0.1	4.4
Gasoline	59.6	4.9	1.5
Glass, flat	109.6	0.4	3.0
Glass containers	112.1	−0.2	−1.0
Gypsum products	111.3	−2.0	−14.1
Hand tools	119.8	−0.2	3.4
Hand tools, power driven	112.3	0.4	3.1
Industrial furnaces	119.3	0.4	4.2
Integrating and measuring instruments	116.2	−0.1	2.2
Internal combustion engines	110.9	0.1	1.4
Lubricating oil	104.2	0.4	5.0
Lumber millwork	121.6	0.2	3.6
Material handling equipment	107.3	0.5	3.3
Metal containers	109.9	0.2	0.3
Metal mill shapes (nonferrous)	126.7	0.8	23.9
Metal tanks	104.1	1.2	8.7
Motors and generators	120.7	0.4	5.3
Motor trucks	123.8	0.8	1.9
Office and store equipment	106.6	0.0	1.7
Paperboard	133.1	0.4	14.9
Paper boxes and shipping containers	123.3	1.2	7.9
Paper office supplies	114.6	1.9	5.9
Paint	111.1	0.1	3.1
Plastic resins	130.0	2.3	21.5
Precision measuring tools	122.2	2.5	7.6
Pumps and compressors	107.8	0.3	2.7
Refractories	113.8	0.4	3.5
Rubber belts and belting	105.2	0.4	1.3
Scales and balances	106.3	0.3	2.7
Steel products	110.4	0.8	9.2
Switchgear	112.9	0.0	2.3
Textiles, synthetic fibers	97.0	0.8	6.8
Textiles, gray fabrics	114.2	0.3	7.9
Tires and tubes	93.9	0.5	3.9
Transformers and power regulators	107.5	−0.5	0.5
Welding equipment	116.7	0.5	5.4
Wire and cable	123.2	−0.8	20.5

STEEL SCENE

Service centers say the heat is easing

The more-than-year-long steel buying boom may be heading for a breather.

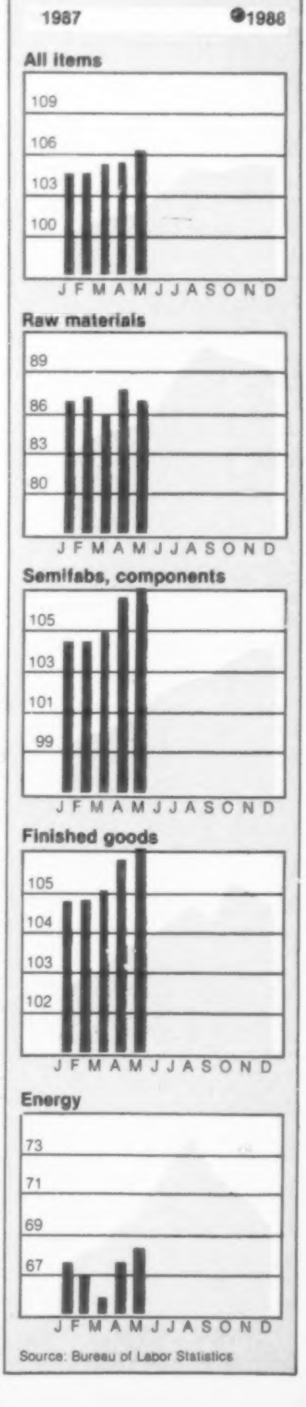
The evidence comes from those who should know best—steel service centers and purchasing managers. Both are now forecasting a decline in metal demand over the next three months.

On the distributor front, 37% of those responding to the latest Steel Service Center Institute (SSCI) survey expect a drop-off in incoming orders this summer—more than twice the 15% who are still looking for continuing increases. And buyers are not that much more optimistic—27% calling for reductions *versus* 19% who anticipate a step-up in purchases.

These projections pretty much back up what mill men and steel analysts have been saying for months now—that current con-

Industrial prices

(Index: 1982 = 100)



Source: Bureau of Labor Statistics

sumption patterns are not robust enough to sustain the strong demand gains of the first six months of the year.

Taking off on this, SSCI president Andrew G. Sharkey observes that while shipping rates for carbon bars and tubing as well as stainless and alloy products are maintaining impressive levels, there are now some signs of leveling off in other sectors. Thus carbon plate and structurals have recently been flat to moderately lower.

As he sums it up, "We are currently seeing a gradual cooling off of an overheated early 1988."

Sharkey also points to rising service center inventories as a sign of an eventual flattening out. He says that his members' inventories aren't all that much out of line (with the possible exception of plate). Nevertheless, he does expect a period of modest steel stock reduction through the third quarter—to bring things back into better balance.

Confirmation that service centers mean to do something about their holdings also comes from their current perception of the situation. Specifically some 45% dub their inventories as too high *versus* only a minuscule 3% who feel further additions may be in order.

Concern about inventories is also noted by buyers. The figures here: 38% say they are aiming at an inventory decline while only 8% say they are planning on an increase.

In short, inventories as well as consumption seem to be working in favor of a fall-off in demand. If so, it means that the long list of items where buyers expect supply tightness in the months ahead—mostly in plate and sheet—may be exaggerated.

Clearly, if mill shipments drop down to an average of 18-19 million tons per quarter (*versus* 21 million in the first half), delivery patterns should begin to improve.

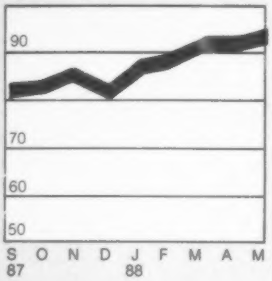
A somewhat slower demand pace also suggests that service center worries about continuing steel price increases may also be overdone. At this stage of the game the fact that 64% of queried distributors are bracing for increases of 2% or more over the next six months has to be regarded as questionable.

A scattering of service centers may be swinging around to this view. Thus 7% of distributor respondents now expect some price erosion (*versus* only 1% two months earlier). While hardly a big number, it does represent a shift in thinking that will bear closer watching in the months ahead.

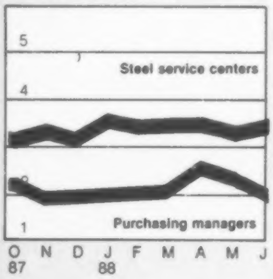
Still another sign of price restraint is the fact that the big auto firms have been able to negotiate new contracts calling for

Steel

Operating rates

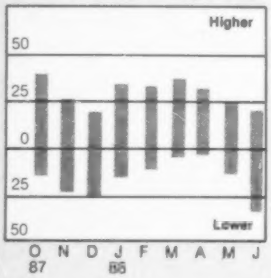


Inventories
(Months supply on hand)

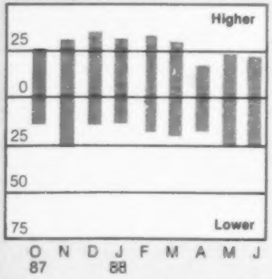


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyers



Import prices
(Compared to domestic)

Steel buyers

ABOVE	52%
SAME	32%
SLIGHTLY BELOW	16%
SUBSTANTIALLY BELOW	0%

Service centers (carbon)

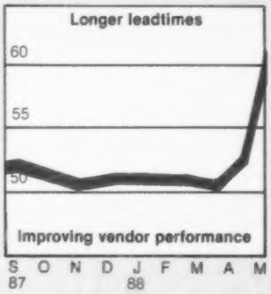
ABOVE	8%
SAME	92%
5-10% BELOW	0%
10-20% BELOW	0%
OVER 20% BELOW	0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

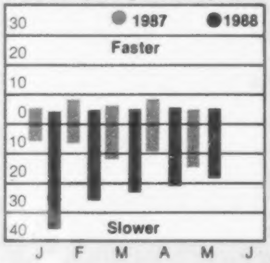
Monthly procurement status report

Leadtime index

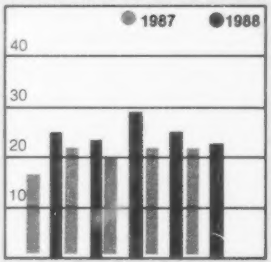
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



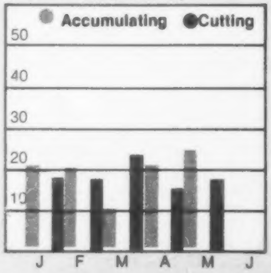
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

only minor increases. It's something that's not likely to be forgotten when other firms begin negotiating this fall.

PROCUREMENT STATUS

Leadtimes slowly shrinking

Leadtime problems just won't go away. At latest report more than one out of every three product categories monitored regularly for *PurchasingWorld* readers is expected to experience further stretchouts.

Upshot: The exclusive *PW* leadtime index is now clocked at a relatively high 62. That's four points above a month earlier and 12 points above the neutral 50 level.

But for the first time in over a year there are a few signs that the worst may be over. Increases in leadtimes were quite modest—running generally in the ½-1 week range. Equally significant, there are now a fair number of items where shrinking leads are noted—including a few in the crucial steel area.

The overall indication of a flattening in availability is suggested by the latest NAPM Business Survey Committee report. Fewer members are now reporting slower deliveries—19% currently, *versus* 21% a month ago and 23% two months ago.

The latest 19% reading is still more impressive than the 5% noting some speedup. But the trend still has to be regarded as hopeful. The net difference between those experiencing slower and faster deliveries (14%) is the smallest in a year.

Still another indication of possible improvement: The percentage of PMs currently committing 90 days or more in advance for production materials has been shrinking—29% two months ago, 25% one month ago, and 22% currently. Conversely, those committing 30 days or less in advance has grown significantly over the same period.

A more sobering note is sounded by the considerable number of items on the NAPM short supply list. Those currently include aluminum, copper, nickel, steel castings, printing paper, caustic soda, plastic resins, selected organic chemicals, silicon, latex disposable gloves, and electronic memory devices.

Problems in the electronics area are confirmed by the accompanying *PW* rundown which shows rising leads for cables, transformers, and linear ICs. Another leadtime survey on semiconductors indicates that deliveries have stretched an average of 2-4 weeks over the past few months.

LEADTIMES (in weeks)

	Month ago	Latest month
CHEMICALS-PLASTICS		
Adhesives	3½	3
Naphthalene	2	2
Paint	3½	3
Paint, Coil Coating	3	3
Paint, Maint.	2½	2
Polyester Resin	4	2
Polyethylene Resin	4½	4
PVC Resin	6	5½
Titanium Dioxide	1½	1½
ELECTRICAL & ELECTRONIC		
Cables	9	8½
Circuit Breakers	4	4
Electromech. Devices	7	7
ICs (Linear)	10½	8½
Motors, Fractional Horsepower	12	14
Motors 1-10 HP	12	13
Motors 10 HP & Up	11	12
Relays	7	8
Transformers	10	10
LUMBER		
Hardwood	3	2½
Plywood	3	3
Softwood	2	2
Particleboard	3	3
OFFICE PRODUCTS		
Copiers	2	2
PCs Workstations	4	4
Facsimilies	3	3
Pre-printed Form	4½	4
Elex Typewriter	3	3
Furniture	4½	4
Printers	3½	3½
Telecommunications	8	7
PACKAGING		
Bags, Kraft	4½	4
Bags, Multiwall	6½	6
Cartons, Corrugated	2½	2
Cartons, Folding	2½	2
Cellophane Wrap	4	4
Plastic Bags	2½	2
Plastic Pkg.	4	4
Shrink Film	3½	3½
Drums, Fiber	2	2
Drums, Steel, Std.	3	2½
Wood Pallets	2½	3
Wirebound Boxes	4	4½
Strapping	3	2½
PAPER		
Fiberboard	4	4
Glassine	5	5
Groundwood	5½	5
Kraft	2½	2
Kraft, Bleached	3	3
Kraft, Natural MFNS	1½	1
Laminated	8	6
Tissue	5	5
NONFERROUS METALS		
Aluminum Coil	16½	15½
Aluminum Plate	21½	21
Aluminum Sheet	18	18
Brass Castings	7	8
Brass Rods	7	8½
Brass Sheet	8	8½
Brass Tube	8	8
Copper Fittings	2	2
Copper Mill Prod.	6	6
Copper Tube	4	4
Lead	4½	4
Magnesium	3	3
Manganese	9	8
Nickel	3	3
Silicon	2	1
Tin	2½	2
Wire, Specialty	4½	4
Zinc	3½	3½
MISCELLANEOUS		
Bearings, Domestic	5½	5½
Bearings, Foreign	16	16
Fasteners	5½	6
Fasteners, Std.	2½	2
Insulation Mat'l.	7	7
Machined Parts	5½	5½
Pipes & Valves	4½	4
Rubber, Synthetic	2	2
Rubber Hose	3½	4
Tungsten Carbide Parts	14	14
Valves, Cast Steel	5	5
Welding Supplies	3	2½
STEEL		
Cold-Drawn Bars	4½	3½
Cold-Rolled Sheet	11½	11½
Forgings	11	11
Galvanized	3½	3
Grey Iron Castings	9	9
Hot Rolled Bars	4½	3½
Pipe, Carbon	4½	4
Plate	11½	11½
Sheet	14	14
Sheet Castings	11	7½
Structurals	10	10½
Tubing	6	6

Figures represent the average leadtimes from various locations.

A second look at 1988
It's bigger and brighter

by Robert S. Reichard, executive editor

Not only is the United States in its sixth consecutive year of economic growth, but the forecasts are now for a seventh year of growth.

And, especially important to purchasing managers, industrial growth this year is expected to exceed that of the Gross National Product.

PW's executive editor, Bob Reichard, in our special January section Forecast '88, correctly forecast that the October market crash would have only a slight dampening effect on the economy. Now, the same sources he researched to correctly call that turn are pointing to more vigorous growth throughout 1988.

The American economy in the first half of 1988 has been performing better than expected. Three basic reasons: 1) The stock market crash of last fall has had almost no discernible impact on consumer spending, 2) export demand has improved substantially, and 3) capital spending is more robust than originally anticipated.

Dr. Roger Williams, *Purchasing-World* Magazine's economic consultant, is now projecting a 3.5% increase in real GNP this year—up a full percentage point from his beginning-of-the-year forecast. His industrial production estimate is adjusted upward by a similar amount, from 4.4% to 5.5%.

Gains, adds the St. John's University professor of economics, will continue into 1989 but at slowly decelerating rates. He feels this slowdown will be due to a combination of factors including somewhat bigger price increases, rising interest rates, and a softening in profit margins. His growth estimate for the first half of 1989 is a 3.3% annual advance rate.

Campaigning impact negligible

Dr. Williams believes that the upcoming presidential election will have little near-term impact, especially as far as the budget is concerned. Williams' reason: neither party is willing to deal seriously and realistically with this matter until after the election.

He also thinks that whichever party wins in November, tax increases appear likely in 1989. If the Democrats win, there would probably be more attention to private benefit programs mandated by the Federal government, but not involving an overall increase in Federal spending. A step along this line has already been initiated in Massachusetts by Governor Dukakis.

Fed's impact to grow

Federal Reserve policy has allowed more rapid monetary growth in 1988 than in 1987—although the Fed has also let market forces move interest rates upward in recent months. Williams expects interest rates to continue rising—and at some point the discount rate could also advance. The Fed is likely to be less generous in providing additional reserves for the banking system. And policy will be more of a restraining influence as 1988 and early 1989 develop.

Some of Dr. Williams' other comments and projections for key sectors of the economy:

- **Manufacturing:** Factory output has come into its own after a long period of the doldrums. A lower value for the dollar has helped, as have more effective internal cost controls and a sizable increase in capital goods purchases. Manufacturing production is moving ahead and manufacturing employment is beginning to follow suit.
- **Wages:** Unit labor costs have already started to accelerate and no early letup is in sight. Wage hikes have begun to pick up a bit and all signs suggest that productivity gains will not be sufficient to offset those wage increases. This year Williams looks for a 4.0% increase in manufacturing unit labor costs—a bit more than the 3.7% gain forecast six months ago and in marked contrast to the 2.1% decline in this key inflation barometer in 1987.
- **Prices:** The comprehensive GNP deflator will advance 4.5% this year (*versus* an earlier 3.5% projection). Moreover, by the first half of next year it could be approaching a 5% annual rate.

Industrial prices will be advancing more rapidly than before, reflecting significant economic growth and increasing pressure on plant and labor capacity. This higher price inflation is likely to continue into 1989. Williams new projections here: A 6% increase this year and 7% annual rate of increase during the first half of 1989.

- **Availability:** The tightening of supplies has come earlier and more sizably than anticipated. The factory operating rate is already above the 83% average projected for 1988. Purchasing managers are thus increasingly faced with slower deliveries.

Sizable increases in plant and equipment spending now shaping up for 1988 will help in the long run. But over the shorter pull this could place additional pressure on existing production capacity.

- **Inventories:** Still no problem here. The all-business stock/sales ratio is projected to be lower in 1988 than it was in 1987. But as 1989 unfolds and demand grows more slowly, figure on this ratio rising a bit. Still, it should remain under last year's average.
- **Consumer spending:** While not over-aggressive, the typical U.S. spending unit has not gone into hibernation as some had feared. Consumer confidence measures have been rising in recent months, and consumer spending managed to rise at a 4.3% annual rate in the first quarter. For the year as a whole, a 2.5% increase is seen—above the 2% rate projected at the beginning of the year.
- **Profits:** Faster GNP growth will

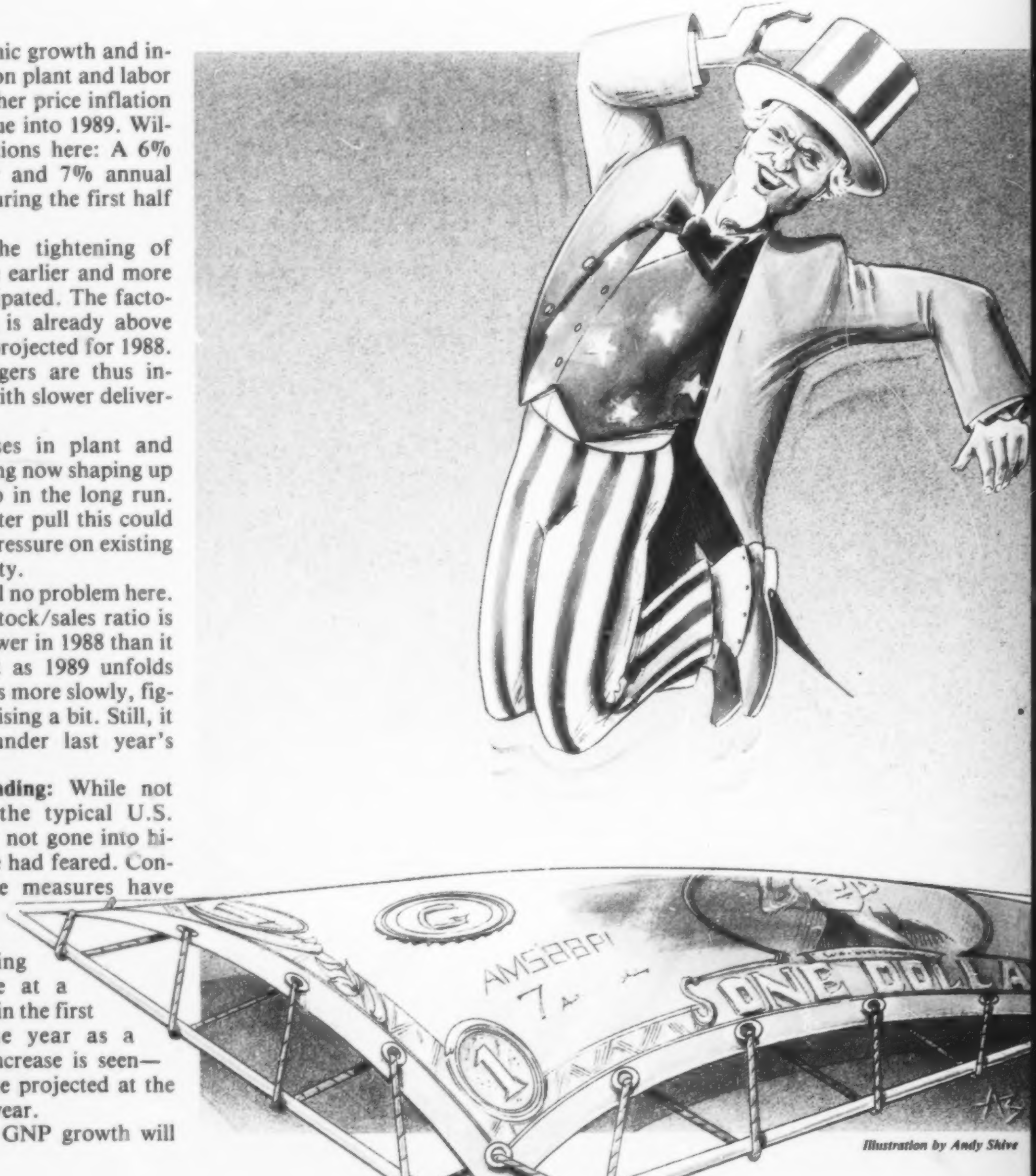


Illustration by Andy Shive

be helpful, along with the larger price increases now envisioned. But modest productivity gains and larger wage hikes will mean higher unit labor costs. Upshot: Look for a narrowing of profit margins. Indeed, recent reports in *Investors Daily* already suggest some softening in earnings.

- **Trade deficit:** The sizable turnaround this year has been a surprise to many. The weaker dollar, better productivity, and more rapid growth in foreign demand have all played a part in increasing our exports and slowing down import gains. Further improvement is expected in 1989.

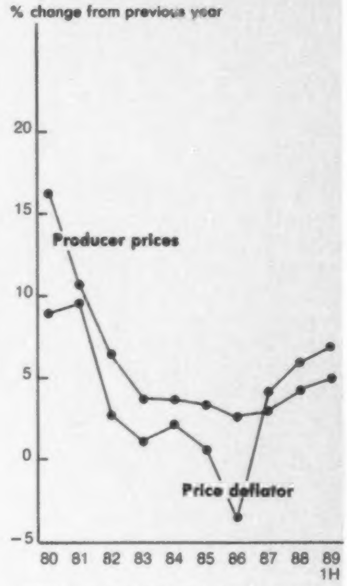
As of now, the 1988 trade deficit in 1982 dollars should drop down to $135 billion (*versus* $146 and $135 billion in 1986 and 1987, respectively). And for early 1989, a further drop-off to $110 billion is seen.

- **Exchange rates:** The dollar has come down in 1988 but at a much slower pace than in 1987. Indeed, since April the value of the dollar has been about flat—and the dollar futures index (an indicator of where the smart money sees the dollar going) has a slight upward tilt.

Despite this index tilt, inflation is picking up in the U.S. and the Federal budget deficit shows no early signs of improvement. So all in all, not much change is expected in the value of the dollar between mid-1988 and mid-1989. ***PW***

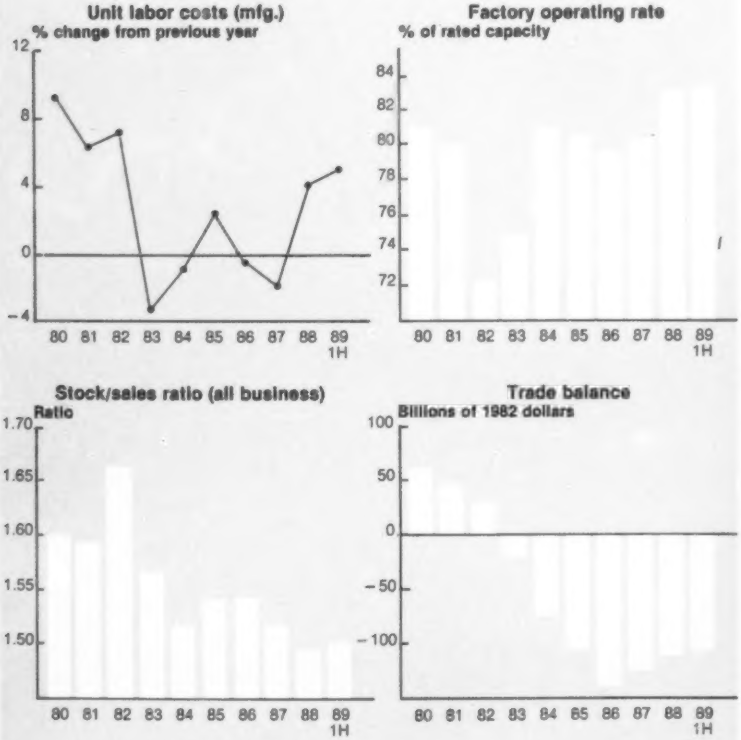
Prices into mid-'89

A midyear look at the economy



Source: Commerce Dept., Bureau of Labor Statistics, PW estimates.

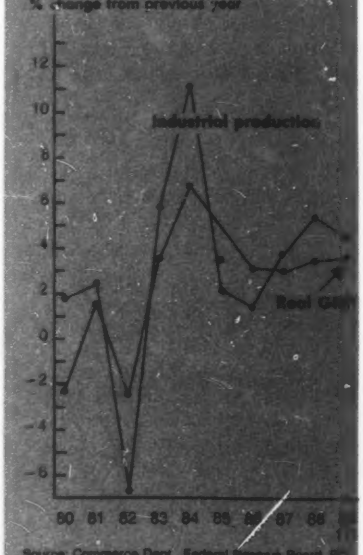
Four key variables into '89



Source: Bureau of Labor Statistics, Federal Reserve Board, Commerce Dept., PW estimates.

Demand into mid-'89

A midyear look at the economy



Source: Commerce Dept., Federal Reserve Board, P estimates.

A SECOND LOOK AT 1988

Durables up, non-durables down

Top corporate executives in the United States are making some mid-course corrections in their original 1988 business projections.

While real demand gains in manufacturing aren't expected to change much (4.5% is the latest overall estimated increase), durables will do better than anticipated—and nondurables worse. On the price front, forecasted 1988 increases are generally higher than they were at the beginning of the year.

The new numbers, part of McGraw-Hill's latest plant and equipment survey, suggest that management is increasing its capital spending plans. And there's a good reason too. A growing number of industries are approaching or exceeding their preferred operating rate levels.

Some of the new study's more specific findings:

- **Durable goods demand:** The average increase in real terms is forecast at 6.3%—far above the beginning-of-the-year 3.0% estimate. This is traceable to capital goods with nonelectrical machinery sales gains now put in the double-digit 10.4% range; more than double the earlier 4.5% estimated advance.

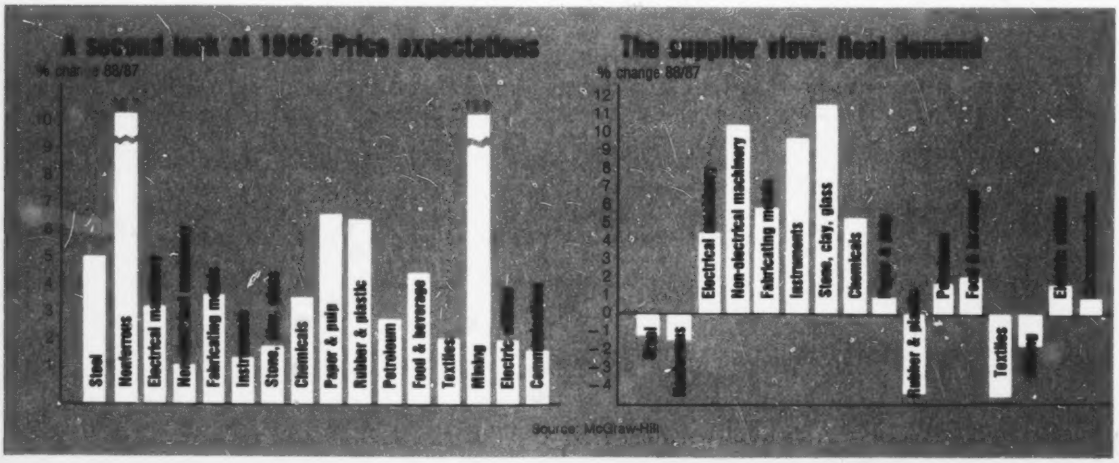
Another strong performer is instruments, where a 9.6% real advance is seen for 1988. Also steel's projected shipment losses have been pared from 5.7% in January to 1.1% currently.

- **Nondurable goods demand:** A substantially reduced average gain is projected—2.3% now *versus* 5.8% six months ago. Only chemicals (up 5.1% in real terms) will do better than originally anticipated. Paper and pulp gains are put at 0.8% currently (*versus* 2.6% earlier). And textile manufacturers are bracing for a 4.7% decline, in sharp contrast to earlier predictions for a 3.6% gain.
- **Durable goods prices:** The average 1988 advance is put at 3.7% (up from the previous 2.4% estimate). Biggest upward revisions are noted for steel and nonferrous metals where 5.0% and 12.7% advances, respectively, are predicted.
- **Nondurable goods prices:** Some upward adjustments are noted here with the average gain now around 4.5% (*versus* 3.0% previously). Every single subsector is being raised here. The biggest gains are seen for paper (6.6%) and rubber and plastics (6.5%).
- **Nonmanufacturing prices:** Mining, reflecting the metals pinch, has been revised (to a 13.8% increase). But inflation rates for the electric utilities and communications sectors remain modest at 2.0% and 1.5%,
- **Capital spending:** The overall 1988 revision is really significant. The nation's decision makers are predicting a 9.9% dollar advance—above the 6.2% increase projected six months ago.

Zero in on manufacturing and the upward revision is even steeper. An earlier 8.8% estimated increase in plant and equipment outlays gives way to a 13.2% gain. Even after allowing for an estimated 4.5% increase in plant and equipment purchase prices, that still suggests an 8.5% real advance.

The biggest capital spending increases are in areas where demand is currently bumping up against capacity. Hence these eye-opening 1988 plant and equipment spending gains: Iron and steel (29.0%), chemicals (19.5%), and paper and pulp (30.5%).

Another encouraging sign: Preliminary 1989 spending plans are pretty much on par with 1988 estimates. Finalization of some plans, now in the talking stage, is sure to inflate this figure. Production is now rising faster than expected. Upshot: Another 5-10% capital spending gain for 1989 now seems like a good bet. ***PW***



A second look at 1988: Price expectations

The supplier view: Real demand

Source: McGraw-Hill

A SECOND LOOK AT 1988

Industrial growth to outpace GNP's

The nation's top econometric forecasting models are still bullish on America. Their basic projections into 1989: 1) A continuation of the longest peacetime boom in history and 2) relatively modest price acceleration—certainly nothing to suggest any new inflationary spiral.

The price figures are encouraging since they take into account the basic upward-tugging forces of high operating rates, brisk demand, increasing exports, and the recent run-up in some basic materials.

But even with all these plugged into the forecasting equations, the readings are quite reassuring. Finished producer prices are expected to advance only 2.4% in 1988. All three of the models surveyed for this report (see table) basically agreed on this estimate.

And while some speedup is seen for the following year, the overall 1989 increase in this bellwether is just a bit above 4.5%.

Less acceleration is seen for the all-inclusive GNP price deflator and the cost-of-living index. Both are targeted to accelerate only 1% in 1989.

Wages hold down prices

According to a spokesman for one of these firms, much of the price restraint reflects basically modest labor cost pressure. His company feels wages for non-farm production workers will rise only 3.0% in 1988 and 4.2% in 1989—not that earthshaking when considering that 1-2% of this could be offset by productivity gains.

As for demand, the three models agree on a 3% increase in real GNP growth in 1988 almost 1% above what they were projecting six months ago (*PW*, 1/88, p. 37). And while the projected average increase drops to 2.2% in 1989 that's also better than earlier-in-the-year estimates.

What the Econometric Models see ahead

Real GNP (% change)	**1988**	**1989**
DRI	2.8	2.8
Wharton	3.0	2.3
Merrill Lynch	3.2	1.6
Average	**3.0**	**2.2**
Industrial production (% change)		
DRI	4.2	3.4
Wharton	4.7	3.1
Merrill Lynch	5.0	2.6
Average	**4.6**	**3.0**
GNP price deflator (% change)		
DRI	2.9	3.7
Wharton	3.1	4.2
Merrill Lynch	3.3	4.7
Average	**3.1**	**4.2**
Finished producer prices (% change)		
DRI	2.3	4.7
Wharton	2.4	4.2
Merrill Lynch	2.6	4.9
Average	**2.4**	**4.6**
Consumer prices (% change)		
DRI	4.0	4.6
Wharton	3.9	5.0
Merrill Lynch	4.2	5.1
Average	**4.0**	**4.9**
Prime interest rate (%)		
DRI	8.6	9.2
Wharton	8.9	10.2
Merrill Lynch	9.0	9.2
Average	**8.8**	**9.5**
Unemployment rate (%)		
DRI	5.7	5.6
Wharton	5.6	5.8
Merrill Lynch	5.4	5.6
Average	**5.6**	**5.7**

Equally significant, industrial production will probably outpace GNP by 1% in both 1988 and 1989. Reason: Some of the biggest demand gains are expected to be in machinery and other goods-producing industries.

This, in turn, is expected to keep unemployment rates low. Next year's consensus here: A 5.7% rate—only fractionally above the 5.6% reading projected for the current 12-month period.

That's not to say, of course, that there won't be problems. Higher interest rates will have to be watched closely. The 3-model average calls for a 9.5% prime rate in 1989, up more than a half a percentage point from the 8.8% average envisioned for the current year.

There's very little variation among the three models as far as price increases are concerned. And the same is true of growth, unemployment and interest rates. Since all of the models are independent of each other, it suggests that the basic determinants of the economy are still fundamentally strong.

And the same seems to hold true for 1990 (not shown in table). DRI and Wharton see real GNP advancing 2.6% and 1.9%, respectively.

There's still nothing on the horizon (based on the time-tested mathematical relationships that underlie these econometric models) to indicate that the long business uptrend is about to end anytime soon. ***PW***

What do you see for 1988?

What's your forecast on how the U. S. economy will fare in 1988? Your opinion is as valuable, and possibly more accurate, than the predictions of most economists.

To see if you're a champion forecaster, enter *Purchasing-World* magazine's 1988 Crystal Ball Contest. Deadline for entries is July 31st. The Top 100 prognosticators will be nationally publicized in *PW's* March issue. Just use the entry blank on page 51 of this issue.

A SECOND LOOK AT 1988

Buyers' midyear projections improve

The nation's industrial purchasing executives continue to view the economy through rose-colored glasses.

On the demand front, they say that things have actually improved—1988 gains are now expected to top estimates made six months ago. And while prices are expected to rise faster than anticipated at the beginning of the year, the rates of increase are still tolerable.

A new *PurchasingWorld* magazine survey suggests that the average procurement bill will go up 5.0% this year—only about 1% more than envisioned by the same respondents in January. Equally important, less than one out of five sees the increase reaching or topping 7%.

Second half revving up

As for demand, these same *PW* respondents say their own firm's activity will increase 5.7% on average this year—fractionally more than their 5.4% earlier estimate. More significant, those anticipating second half acceleration outnumber those expecting deceleration by an impressive 3:1 margin.

A special midyear NAPM Business Survey Committee report paints a similar price and demand picture. True, the estimated 5.8% price increase projected by the NAPM for the current year is slightly higher than that envisioned by *PW* readers. But the fact that 3.8% of this advance has already been posted suggests that the worst may be over.

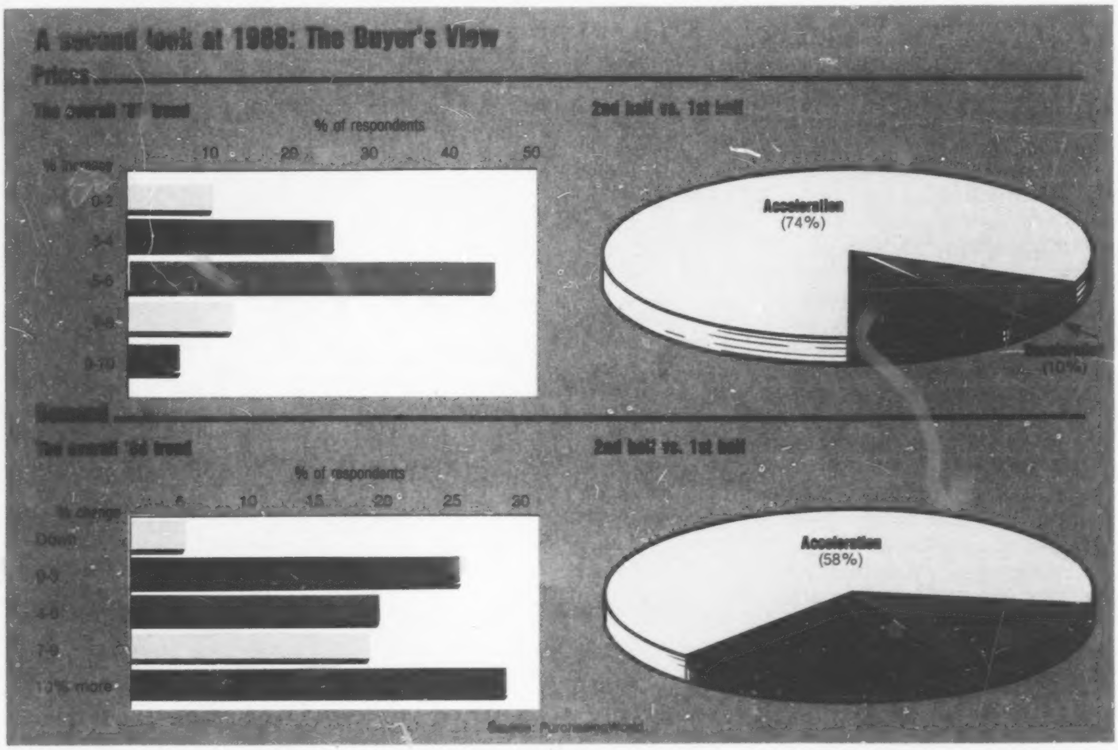
Selective/moderate increases

Moderation is also indicated by the fact that most of the upcoming NAPM survey increases are expected to be 1) selective rather than across the board and 2) moderate or slight rather than severe.

And while the NAPM doesn't give a specific demand estimate, the fact that seven out of every eight respondents say 1988 will be better than 1987 has to be reassuring.

The *PW* survey indicates that inventories will stay slim. Despite continuing business gains, the number of survey respondents expecting to add to stocks is pretty much balanced out by those anticipating cutbacks.

Comments suggest several factors may be behind this continuing "keep 'em lean" strategy. First and foremost is better inventory control, with an added assist coming from just-in-time stocking. Other factors mentioned: High carrying costs and difficulty laying in extra supplies of



Source: PurchasingWorld

items like steel, plastic resins and electronic parts.

"Hard to get" list grows

Other products said to be hard to get these days include off-road tires, polyester, nylon, bearings, aluminum, nickel, refrigeration compressors, printing paper, corrugated, heavy construction equipment, titanium dioxide, and caustic soda.

Such tightness could be one reason why these same *PW* readers expect leadtimes to continue to stretch. Fifty-three percent are looking for further stretchouts *versus* only 10% who expect some shrinkage.

Still further confirmation of supply problems comes from replies to a question posed by the NAPM Business Survey Committee on factory operating rates. At latest report, 58% said their companies were operating at 90% or better capacity. That's up significantly from the 45% and 50% figures of a year ago and this past January, respectively.

But some relief could be on the way. Replies to another NAPM question indicate that 53% see increases in their firm's capital outlays this year. That's better than a 10% increase from the beginning-of-the-year 42% reading.

Imports growth continues

One surprising NAPM finding: Imports are expected to continue rising, despite the softer dollar which has raised U.S. landed costs. Over the next six months, for example, 28% of the responding companies are planning on increases *versus* only 21% who will be reducing their import purchases.

While the report doesn't give reasons for this, several are suggested: 1) lack of alternate domestic sources, 2) shifting over to countries where the dollar has managed to hold up, and 3) long-term commitments with foreign suppliers. ***PW***

NAPM survey revises seasonal factors

Sudden swings in price, production, delivery performance, and inventory levels can be—and often are—misleading. To a large extent they may be just temporary aberrations, due more to seasonal variation than to any shift in the underlying procurement climate.

Uncle Sam knows this--witness the fact that most business statistics are now seasonally adjusted. And so does the NAPM Business Survey Committee, which has just revised its "seasonal adjustment" factors for all of its monthly series.

According to Robert J. Bretz, committee chairman and director of materials management for Pitney Bowes, "Price increases seem to be most prevalent at the beginning of the year. And late winter/early spring seems to mark the peak time for production gains, delivery slowdown, and inventory bulges."

Here's a detailed look at these seasonal adjustment factors as prepared for the NAPM by the U.S. Commerce Department:

Prices: The number of PMs reporting increases is usually highest in April (nearly 5% more than for the year as a whole)—and lowest in August (nearly 5% less than for the year as a whole).

Production: The number of buyers noting increases tends to reach its zenith in the February-April period (8-9% above normal) and its low point in July (nearly 11% under average).

Vendor deliveries: The largest number of slowdowns is likely to occur in March (about 5% more than the yearly norm)—with the smallest number of slowdowns (3% less than average) coming in August.

Inventories: The number of PMs adding to stocks is likely to reach its high point in February (nearly 9% more than for the year—probably in preparation for late winter production gains). On the other hand, the low point is hit in November when nearly 10% fewer than normal are usually adding to their holdings.

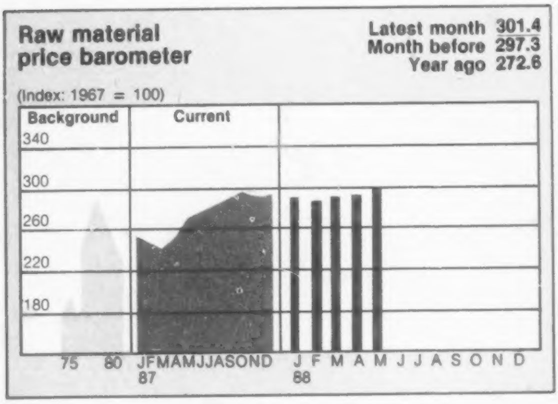
These seasonal adjustment factors are all summarized in the accompanying charts. Observes Bretz, "Apply these numbers to NAPM Business Survey Committee results—and you end up with a much more meaningful picture of basic business trends." ***PW***

Seasonal adjustment factors
(1.00 equals yearly norm)

	Price increases	Production increases	Vendor delivery slowdowns	Inventory increases
JAN	1.036	1.061	1.006	1.012
FEB	.995	1.085	1.003	1.087
MAR	1.026	1.093	[illegible]	[illegible]
APR	1.048	1.081	1.001	1.049
MAY	.994	1.019	[illegible]	[illegible]
JUN	.995	.975	.970	.989
JULY	.992	.893	[illegible]	[illegible]
AUG	.953	.962	.972	1.028
SEPT	.990	1.018	1.009	[illegible]
OCT	.997	.970	.998	.962
NOV	.982	.962	.989	[illegible]
DEC	.994	.889	.991	.925

Source: National Association of Purchasing Management.

BUSINESS DATATRAK



Raw material price barometer

Latest month 301.4
Month before 297.3
Year ago 272.6

(Index: 1967 = 100)

LATEST SPOT MARKET PRICES

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	16.50
Steel, bars, Pitts., cwt.	16.50	16.50	16.50
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	19.45
Steel, plates, Pitts., cwt.	19.75	19.75	18.25
Steel, plates, H.R., Pitts., cwt.	19.75	19.75	18.25
Steel, sheets, C.R., Detroit, cwt.	28.15	28.15	26.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	1.26	1.08	.70
Antimony, N.Y., dealer, lb.	0.98	1.08	1.18
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	1.80	1.66	1.37
Brass, yellow, [sheet], lb.	1.75	1.61	1.32
Cadmium, N.Y., dealer, lb.	8.00	7.90	1.60
Copper, electrolytic, wire bars, refd., lb.	1.16	1.02	.73
Copper sheet, over 24 in., lb.	1.88	1.74	1.46
Lead, common, N.Y., lb.	.36	.34	.35
Magnesium, pig ingot, [99.8%], lb.	1.58	1.53	1.53
Mercury, 20 fl. lots, N.Y., fl.	355.00	345.00	310.00
Molybdenum, oxide, dealer, lb.	3.50	3.58	2.58
Nickel, cathode, dealer, lb.	7.05	7.95	2.17
Platinum, dealer, oz.	567.00	517.00	582.00
Silver, N.Y., oz.	7.01	6.37	7.82
Tin, N.Y., dealer, lb.	3.31	3.21	3.20
Zinc, Prime West, East St. Louis, lb.	.63	.57	.45
Zinc, die casting alloy, No. 3, lb.	.675	.615	.495
PAPER			
Uncoated book #3 offset, ton	920.00	920.00	860.00
Watermarked bond, ton	1070.00	1070.00	985.00
Gummed sealing tape, carton	17.57	17.33	16.68
Grocery sacks, ton	455.00	455.00	390.00
Solid bleached paperboard, ton	685.00	685.00	620.00
Kraft linerboard, 42 lb., unbleached, ton	410.00	410.00	350.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.285	.283	.240
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.22	1.22	1.22
Cotton middling, 1", N.Y., lb.	.644	.604	.682
Printcloth, 48", 80x80, N.Y., spot, yd.	.510	.540	.650
Army duck, 37", 13 oz., yd.	1.510	1.510	1.445
Blended printcloth, 64", 78x54, yd.	.64	.66	.94
20s combed yarns	2.00	2.00	1.88
Wool 64s, Staple, lb.	4.50	4.50	2.70

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	100.00	100.00	105.00
Benzene, petroleum, tanks, Houston, gal.	1.05	1.03	2.50
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.55	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.685	.685	.910
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.55	.53	.28
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.34	.34	.27
Polyethylene resin, low density liner film grade (market place), lb.	.465	.465	.315
Polypropylene, homopolymer grade (market price), lb.	.515	.515	.390
Polystyrene, general purpose grade (market price), lb.	.590	.580	.470
Polyvinyl chloride, pipe grade (market price), lb.	.420	.400	.325
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.45	.45	.52
Sulphur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	134.50
Sulphuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.87	.87	.77
Xylene tanks, gal.	.87	.87	.85
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	329.30	327.05	329.30
Lumber 2x2 pine, mbf, cl	326.15	327.15	324.65
Plywood, plyform, ¾", msf, cl	578.70	579.35	580.75
Plywood, ⅝", msf, cl	413.45	414.45	384.15
Cement, bulk, ton, tl	65.02	65.01	64.35
Sand, ton, cl	7.32	7.32	7.21
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	49.10	49.46	49.08
Crushed stone, 1½", ton, cl	8.50	8.47	8.29
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.93	0.93	0.90
Gypsum sheathing, ½"x1"x8", msf, tl	228.43	228.43	227.00
Brick, common, per thousand, tl	204.91	204.91	192.82
Asphalt paving, AC-20	128.37	129.30	127.31
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.58	7.58	7.15
FUELS			
Crude oil (W. Tex Int Cush), bbl.	16.45	17.50	20.05
Diesel (reseller rack, Chi), gal.	.4625	.5050	N.A.
Fuel oil No. 2 (N.Y.), gal.	.4425	.5150	.5275
Fuel oil No. 2 (Gulf spot), gal.	.4150	.4650	N.A.
Fuel oil No. 6 (N.Y.) contract cargo, bbl.	16.00	16.50	N.A.
Gasoline (reg lded NY), gal.	.5200	.5410	.5775
Gasoline (reg unlded NY), gal.	.4975	.5285	.5635
Kerosene (reseller rack, Chi), gal.	.5050	.5540	N.A.
Propane (Mt. Belviu, Tex), gal.	.2325	.2450	.2400
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	104.00	108.00	83.00
Steel, No. 1 hvy., dlvd., Chi., ton	108.00	111.00	76.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.970	.890	.650
Copper, No. 2, East, wholesale buy, dlvd., lb.	.880	.795	.565
Brass, red, East, wholesale buy, dlvd., lb.	.930	.850	.610
Brass, yellow, East, wholesale buy, dlvd., lb.	.425	.425	.345
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.680	.620	.435
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.750	.705	.475
Zinc, old, East, wholesale buy, dlvd., lb.	.240	.240	.200
Lead, clean solids, East, wholesale buy, dlvd., lb.	.220	.210	.230
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	15.00	20.00	45.00
Paper, old corrug. box, dlr., N.Y., ton	5.00	5.00	25.00
Old newspapers, Chi., ton	15.00	15.00	N.A.
Old white ledger, Chi., ton	75.00	75.00	N.A.

[Sources: Metals Week, American Metal Market, Engineering News-Record (20-city averages), Wall Street Journal, Journal of Commerce, Chemical Marketing Reporter.]

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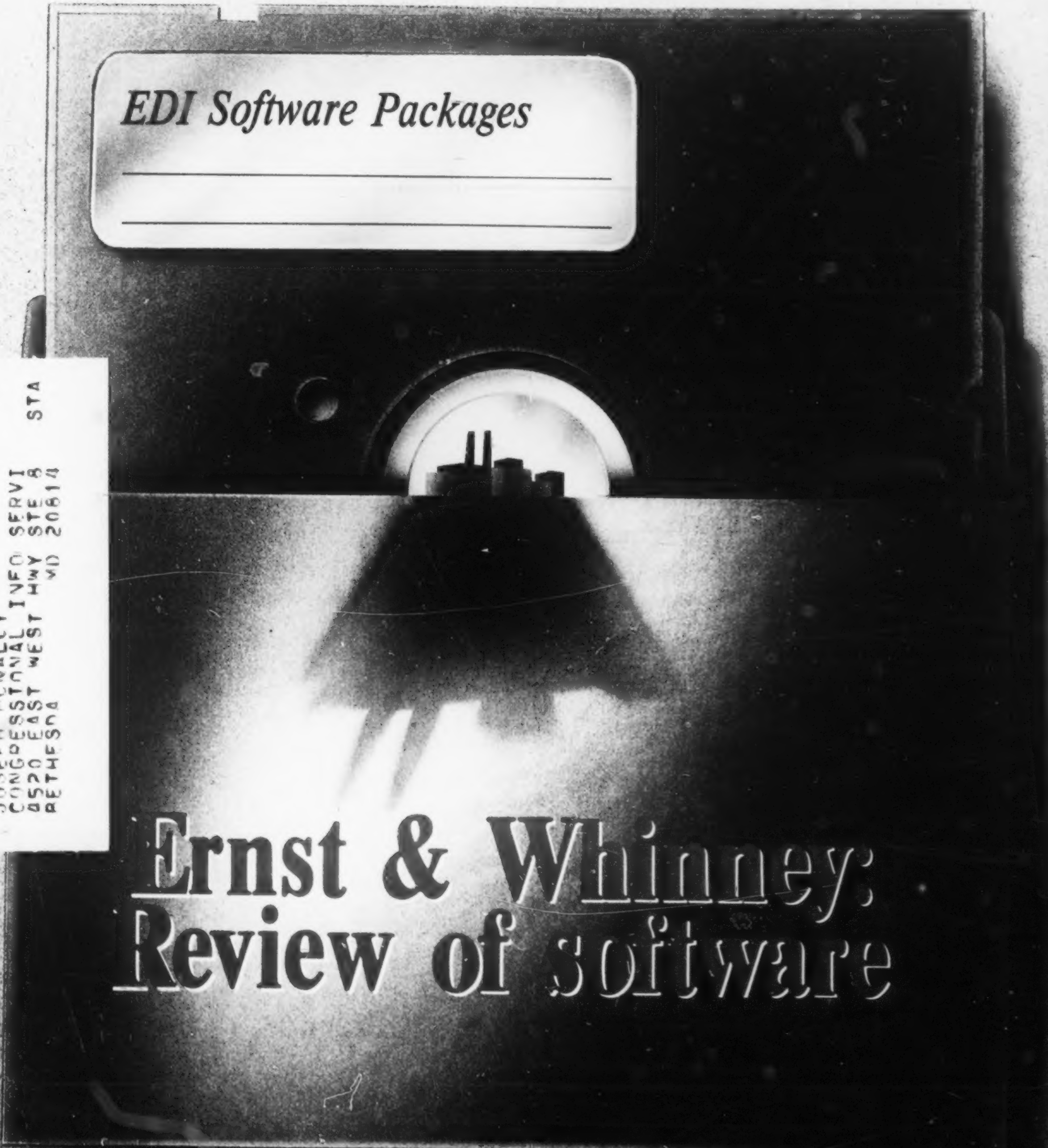

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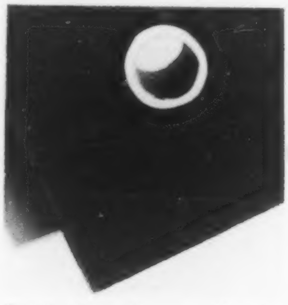

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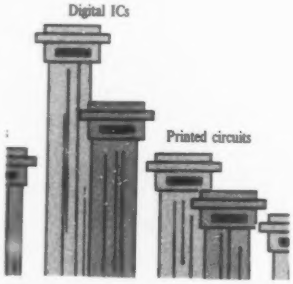

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PurchasingWorld

PW POINTERS

Want connectors in a hurry? Is 24-hour service fast enough?

A new quick-service program will assure AMP customers 24-hour shipping on a wide array of popular connector and packaging component products. "AMP is dedicated to being the most responsive connector supplier," says Richard Prescott, manager of product information services, "and this is one more way we are demonstrating our responsiveness."

The quick-service program complements the firm's established product information center, and will allow customers to order via a toll-free number. AMP products will continue to be offered by a network of over 300 distributors, plus cable assembly cooperatives. **Circle 271**

Wacky, but real, reasons why people want raises

Unconventional reasons some employees give when they ask for raises or promotions can be frivolous, odd, comical, illogical, ridiculous or just strange. "It's getting very expensive to feed all of my birds," is one wacky reason someone used in asking for a raise according to a survey of executives from leading firms conducted by Robert Half International.

Other uncommon reasons mentioned by survey respondents are:
—The area's economy is improving, so why shouldn't mine?
—If I get a promotion, I'll finally be able to impress my father-in-law.
—I want to pay for karate lessons.
—Anyone who can last three years in this company should automatically be made a vice president.
—It would be a very nice birthday present.
—I could use the money to buy a motorcycle for my boyfriend.
—I deserve a raise because I spend more time getting my work done than anyone else in my department.
—I have to support three wives, one of whom I'm still happily married to.
—I need another raise to pay for the new car I bought to celebrate my promotion last month.
—My therapist says I deserve a promotion.

Looking for trade names? Directory has 206,000!

Can you match the following trade names with the products they describe?

1. Plum Loco	A. Seltzer water
2. Goldrush	B. Toy robot
3. Techforce	C. Rubber ball
4. Dust Brain	D. Ice cream
5. Rocky Mountain	E. Preserves

Your job in matching up the right combinations would be a snap if you had Gale Research's sixth edition of the *Trade Names Dictionary* which lists over 206,000 trade names from 44,000 companies. It includes trade-named products that you see everyday, plus some less conventional items such as: orally inflatable splints, pet contraceptives and cologne, graffiti remover, and canned wine.

The two-set dictionary sells for $300. With a companion company index the price is $310. And, a *New Trade Names* single volume is $230. The answers to the quiz are: 1-E; 2-D; 3-B; 4-C; and, 5-A. **Circle 99**

PurchasingWorld

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Hand-held circuit analyzer detects voltage drops

Capable of detecting voltage drop beyond the limits established by the National Electric Code is American Electric's SureTest™ multi-function circuit analyzer. New to the Holub line of testers, SureTest enables the user to determine quickly and reliably the load capacity of a circuit by indicating voltage drop of more than 5%, or excessive line resistance. The instrument will signal the proper wiring and grounding of receptacles, and the proper function of ground-fault interrupters. **Circle 272**

Pooled purchases pare telecommunications costs

If your company is located in the midwest and you would like to save money—possibly a lot of money—on long-distance telephone charges and telecommunications equipment, you may be in luck. The Midwest Communications Exchange, Cleveland, is a limited partnership that pools purchases of long-distance services and communications equipment so that small to medium-sized companies can get the same volume discounts that only large companies qualified for in the past.

MCX signed a three-year agreement with MCI and Litel for long distance service and is currently ne-

No inflation acceleration

It's still hard to make a case for any significant acceleration in the overall inflation rate.

That's not to say that there aren't upward factors to worry about. Certainly 1) continuing demand gains, 2) recent advances in factory operating rates, 3) high import tags engendered by the soft dollar, and 4) the current drought will all bear close watching.

But none of the above looks strong enough to upset the applecart. Near-term demand gains, for example, are likely to be quite moderate. Most economists are talking in terms of a 2.5-3% annual rate of advance in real GNP for the second half—about one percentage point under the first half.

On the capacity situation: Operating rates in some basic raw materials are high—as a result, prices of these products have jumped significantly.

But that doesn't tell the whole story. The all-industry factory operating rate is still well below that of the late 1970s when a lack of production capacity sent prices through the roof.

More important—new capital investment should prevent any further substantial jump in operating rates. A recent McGraw-Hill survey suggests American plants will be adding 7% to their production potential this year.

And preliminary estimates point to another 4-4.5% advance for 1989. Superimpose those projected capacity additions on the moderate demand gains now being forecast—and the availability situation doesn't seem to be getting any worse. In fact, it could get better by early 1989.

Another reassuring note on the supply front: The three industries which have seen the biggest price runups over the past few quarters (metals, chemicals, and paper) are also the three contemplating the largest percentage gains in plant and equipment spending this year. Implication: Upward price pressures in these areas should soon begin to taper off.

Nor do rising import prices seem to present too much of a problem. True, tags on incoming goods have moved up strongly in recent quarters. But the worst may be over as the U.S. dollar shows signs of stabilizing after more than two years of steady decline.

Even the drought impact on food prices is likely to be marginal—at least as far as the current year is concerned. The Department of Agriculture has upped its 1988 food price inflation estimate by only one percentage point—from 2-4% at the beginning of the year to 3-5% currently. That's not nearly enough to send any shock waves through the economy.

There is continuing good news on the productivity front. Factory efficiency gains remain quite high—enough to offset pay increases which remain quite moderate. Last year the average factory worker turned out 3.3% more than he did in 1986. And while 1988 to-date figures are somewhat lower, new acceleration is possible as more modern equipment comes on line.

Inflation: concern but not worry

A bit concerned but not necessarily worried about inflation—that's what some purchasing executives of the nation's biggest corporations are telling Machinery and Allied Product Institute (MAPI) survey takers.

The big price headaches, say the survey's respondents, are in the metals area. On the other hand, other anticipated boosts are likely to remain well in the single digit range this year (see chart for details).

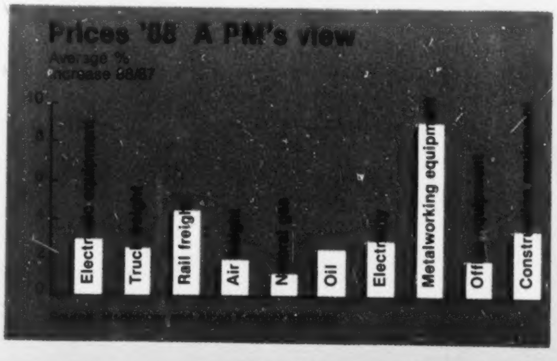
Projected leadtime stretchouts aren't that horrendous either. The average increases *vis a vis* 1987 (for the 12 product categories where data is pertinent) are generally put in the 2-4 week range.

And as far as shortages are concerned, only three product lines received frequent mention—ferrous and nonferrous metals (42% of the respondents), bearings (10%), and forgings (6%). The only other items noted by more than one company were memory devices, resins, fasteners, and corrugated board.

Going back to price—the concensus calls for a less than 5% boost this year (cost-of-living basis). This is because there is no evidence of stockpiling—nor of any inflation spreading beyond raw materials price pressures and capacity restraints.

MAPI adds that there are a number of reasons for this restraint—including 1) the greater use of long-term contracts, 2) a reduction in the number of suppliers and more effective supplier/customer partnerships, 3) offsetting cost savings and productivity increases, and 4) escalation clauses that don't "ever escalate".

The study further notes that global competition is not that far offstage—and to maintain market position many firms have had to live with lower-than-expected profit margins.



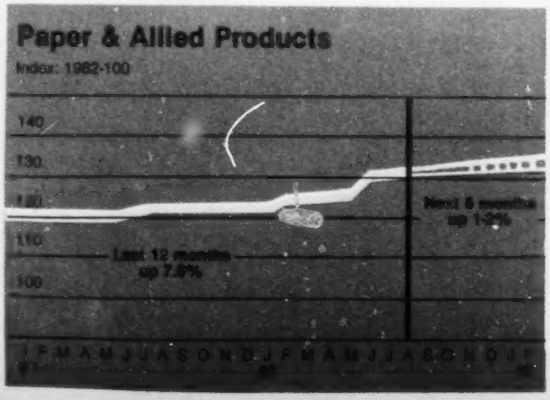
Paper still up on good demand

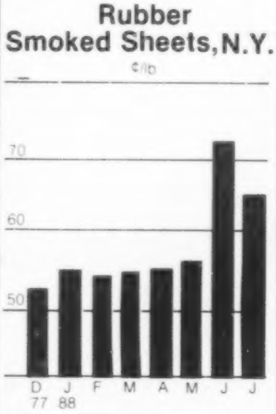
CURRENT SITUATION: Still no end in sight to the sellers' market as good demand and tight supplies keep operating rates near maximum levels. Prices (sparked by a new boost in market pulp) remain firm—and in some instances are still rising. Some typical advances in lists since the beginning of the year: Forms bond (12%), uncoated groundwood (8%), unbleached kraft linerboard (8%), and corrugated boxes (5%). The only signs of easiness are in newsprint where expectations of another boost are being pushed further ahead into the future.

DEMAND: Another record year is all but assured. Right now the industry looks to turn out a peak 75-76 million tons of paper and board in 1988. That's 1.5% above last year—and follows on the heels of 5% or bigger advances during each of the previous two years. some of the gains anticipated for individual product lines: Newsprint (2%), uncoated groundwood (6-6.5%), uncoated free sheet (no change), coated papers (3-4%), and unbleached kraft linerboard (2-3%).

SUPPLY: High operating rates attest to market snugness. True, a fair amount of new capacity has been announced, but it won't come on stream in time to affect 1988. Thus most grades will hold in the 90%-plus range—led by newsprint (100%), unbleached kraft linerboard (99%), and coated papers (93%). Uncoated groundwood and unbleached kraft paperboard—each at 86%—will be somewhat easier. **Longer run, things should ease up a bit—especially in newsprint** where North American capacity will rise 3% next year and 5.5% in 1990, **in uncoated free sheet** where 5% and 7% gains are projected, **and in linerboard** where gains will approach 4.5% and 3%, respectively.

PRICE OUTLOOK: More increases lie ahead—though they are likely to be smaller and more scattered than those posted over the past 12 months. One thing for sure, the big white paper increases of the past few quarters won't be repeated—as inventories begin to rise a bit. Some near-term advances are likely for both pulp and bleached board.




Rubber
Smoked Sheets, N.Y.

Rubber usage, prices up

Blame a hefty 20%-plus jump in natural rubber quotes over the past year (to 66-67¢/lb, an 8-year high) on a growing global shortfall. The International Rubber Study Group puts world consumption for 1988 at 4.94 million metric tons—140,000 metric tons under production. An 125,000 metric ton shortfall is tentatively being projected for 1989. Behind much of the new tightness: The AIDS crisis which caused a sharp jump in rubber-containing surgical gloves and condoms.

Action in ferroalloys

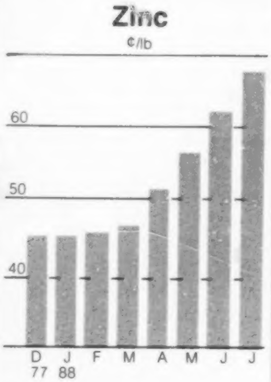
Plenty of price action here. On the upside are many manganese, chromium, and silicon items. Ditto vanadium, where South African pentoxide quotes have moved up about 10% (to $3.30/lb). Tungsten has turned easier—with spot ore down to $43-50/stu—off about $15/stu from recent spring levels. Nickel is also sliding—and could be down to $5/lb by year-end. This is also true of molybdenum, where dealer oxide quotes at latest report were under $3.50/lb—well below the $4.10/lb early 1988 peak.

Office equipment offers discounts

Demand may be booming—but substantial discounts are still available for those willing to shop around. Office typewriters, for example, can generally be purchased for 20-25% under list. Even bigger discounts are available on laser printers. Facsimile machine discounts run at around 20%. As for copiers—anywhere from 20-30% can be knocked off the manufacturer's suggested list—with some dealers offering a replacement for downtime when a machine is out of service for more than a day or two.

Air freight continues to rise

Outbound international rates (over both the Pacific and North Atlantic) could be up another 10% this fall—probably sometime early in the fourth quarter. These follow two increases on Atlantic routes and one on Pacific routes over the past year—with each boost coming to 10%. While the latest round of rate hikes hasn't been set in concrete yet, many big freight forwarders have already been notified. Behind the projected advance: Continued strong demand engendered by the soft dollar.



Zinc joins the runup

The plating metal has joined the nonferrous runup with a vengance. Prices in recent weeks have moved as high as 70¢/lb—a whopping 50%-plus advance over beginning-of-year levels. Reasons: Good demand and substantial producer order backlogs. But the increase may have been overdone—judging from the near global supply-demand balance being projected for the year. A correction can't be ruled out—with prices possibly dropping back to 60¢/lb or under by year-end.

Textile fibers up and down

The price picture is mixed. Cotton should be edging lower (with tags well under 60¢/lb expected)—on a combination of improving weather in growing areas and the implementation of a new government pricing program. On the other hand, wool tags remain close to current sky-high levels as the Australian Wool Corp. sets new support levels well above the 1987-88 price floor. And on the polyester front, recent large increases in ethylene glycol (a key raw material) suggest another round of increases in the synthetic fiber—possibly as early as the upcoming fourth quarter.

Copper falls toward fall

Quotes continue in the $1/lb-plus range—well under the $1.50/lb peak of earlier this year. One reason: An increase in availability—thanks to higher domestic production and a jump in imports from Chile, Australia, New Guinea, and Portugal. In addition, Noranda is planning to reactivate its Canadian Gaspe mine. All this suggests a slow buildup in inventories—with prices dropping back into the 90¢/lb range by this fall.

Sulfur demand rises

Brace for a modest price boost—fueled by a combination of booming phosphate exports and improving domestic consumption brought about by the drought. All in all, demand could be up by 10% over the next few quarters. Another price firmer: Falling inventories. Domestic stocks at latest report were down to 1.9 million tons—off 400 thousand tons from 1987. All this could boost off-list Tampa quotes which have been running in the $118-120/ton range—some $8-10/ton under posted levels. Best bet: A $3-5/ton boost in transaction tags by year-end.

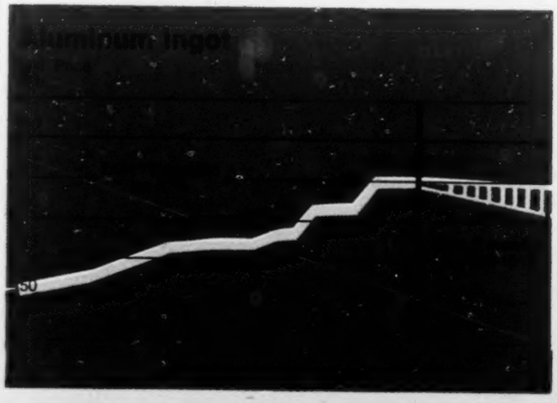
Aluminum demand, prices high

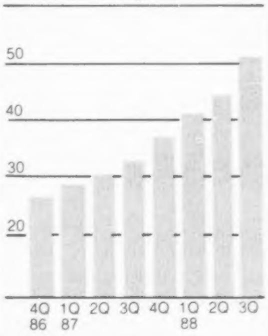
CURRENT SITUATION: Demand continues quite strong—with distributors at latest report putting year-to-date shipments better than 10% ahead of year-earlier levels. **Prices, meantime, remain at sky-high levels. Market ingot is now commanding $1.25/lb or more—up better than 50% from last summer's levels.** Flat-rolled products have also been rising steadily though not quite as spectacularly. In any case, a fourth round of hikes this year has just added another 7-19¢/lb onto many product lines.

DEMAND: While some second half leveling off seems almost certain, it should not be enough to prevent another record year. U.S. shipments for all of 1988 should rise 2-3%—reaching near 16.5 billion lb. **Especially strong performances are seen for beverage cans and aerospace fabricated products.** Global consumption is scheduled to rise, with totals hitting 14.2 million metric tons, *versus* 13.9 million in 1987 . The long-run prognosis is also bullish, as average annual domestic gains run in the 2% range.

SUPPLY: Low global stocks point up current snug markets. At last report, Free-world holdings were down to near 14.5 million tons—off more than 20% from year-earlier levels. Viewed from another perspective, global inventories represent only about a 30-35 day supply now—half that prevailing as recently as 1985-86. **On the other hand, a change seems to be in the making.** LMI holdings are beginning to rise as global capacity is gradually stepped up.

PRICE OUTLOOK: Figure on a mixed trend. The extremely volatile ingot should slide off from currently inflated highs—with quotes here edging toward the dollar mark toward year end. **Semi-fabricated products should be a lot more stable**—as it takes anywhere from 6-9 months before a drop in ingot is passed through to the value-added fabricated sector. Finally, better market balance over the long run suggests that the easing trend will continue through 1989.





Polyethylene

(low-density liner grade)

Polyethylene prices up again

Prices prodded by a combination of rising feedstock costs and strong demand have moved up another 5¢/lb. Expect to pay anywhere from 51-53¢/lb for big volume purchases of both low-density and high-density (LDPE and HDPE) material. The upward market pull can best be appreciated by looking at this year's projected demand gains—4% and 7% for LDPE and HDPE, respectively. And this comes on top of the even bigger 9% and 16% gains of last year. Supplies have tightened significantly with this year's operating rates estimated to be in the 94% range for LDPE and 101% for HDPE.

Steel increases modest

Any near-term price increases are likely to be quite modest. Sign of the times: Automakers have negotiated new contracts with the mills that call for only 1-2% increases on sheet products over the 1989 model year. Other products will level off, too—with the average transaction price by late fall expected to run in the $515/ton range—less than $5/ton above April-June averages. This leveling off is partially due to better supply-demand balance. Most tightness is expected to disappear by year-end or early 1989 as shipments drop from 21 million tons in the second quarter to 18 million over the last three months of 1988.

Computers more cost-effective

New enhanced versions of IBM mainframes are expected to cost 8-10% more. But this will be offset by a 20-25% increase in computing power. Elsewhere, Hewlett-Packard and NCR have cut prices on personal computer lines by as much as 18%. Computer tags have not been decreasing as fast as they had previously. Reason: The recent jump in memory devices used in these machines.

Chlor-alkalis picture mixed

Caustic soda prices have been shooting up because of an extremely tight supply situation—with spot market buys on the East Coast said to be commanding as much as $500/short ton for barge lots. Also, caustic's co-product, chlorine, has been falling—with FOB prices as low as $50/short ton reported as a shortage of ethylene slows demand from ethylene dichloride producers.

U.S. competitive position improving

Price comparisons are making American-made goods more and more attractive.

The change in competitive position over the past few years borders on the spectacular. Since 1985, the ratio of U.S. wholesale prices to foreign wholesale prices (compiled by the Federal Reserve Bank of New York) has dropped by an eye-opening 50 points.

The actual differential between U.S. and imported goods quotes hasn't changed as drastically as this relative price comparison suggests—primarily because foreign sellers have opted to accept lower margins. Nevertheless, the shift is substantial—and helps explain our shrinking balance of trade deficit.

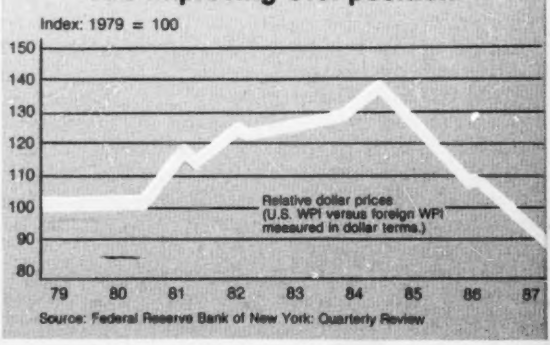
There are several reasons for this improving U.S. competitive position according to analysts at the New York Fed. First and foremost has been the big drop in the U.S. dollar *vis a vis* foreign currencies. But other factors have also been playing roles—notably 1) U.S. wage restraint, 2) strong gains in U.S. productivity, and, 3) improved domestic quality.

On the wage front, the domestic pay rate disadvantage has all but disappeared—$13.50/hour here *versus* $13.25/hour in foreign industrial countries viewed as a whole. Compare this to a 16% disadvantage in 1980 (when exchange rates were close to current levels)—and the role of wage restraint becomes clear.

U.S. firms over the past four years have managed to beef up productivity significantly. Over this period, U.S. factory productivity gains have averaged out at over 4.5% a year—in sharp contrast to the 2% levels of the previous decade.

These gains are much the same as noted in the average overseas industrial country.

Our productivity advantage is still quite significant: Output produced in one hour of labor time in the U.S. requires almost one hour and 10 minutes in West Germany and Japan.

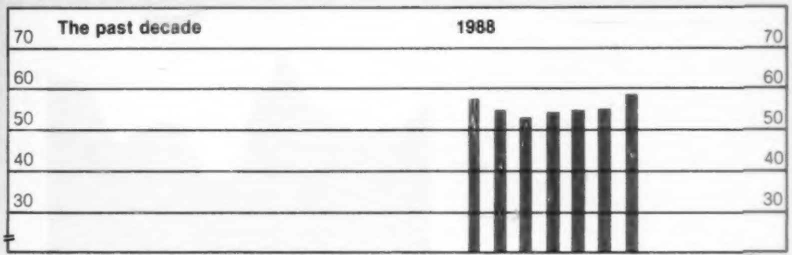


The improving U.S. position

Source: Federal Reserve Bank of New York: Quarterly Review

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Signs call for continuing economic growth

The economic expansion—more than 5½ years old—shows no signs of flagging.

Latest signs of vigor include an unexpected low unemployment rate (5.3% annual rate), a still bearable level of inflation, and solid gains in new orders.

The impact of these barometers is summed up by two leading indicator indexes—one published by Uncle Sam and the other by the NAPM Business Survey Committee. Both are indicating continuing gains in fall and early winter.

The NAPM indicator (see chart) is truly impressive. The latest reading, 59.3, is up more than four points from the previous month. Past experience indicates that if current high readings continue, real GNP could top the 3½% mark.

Nor does the longer pull look all that bad. Rising exports are expected to increase industrial production for at least another year. Current expansion could persist into 1990 or beyond.

There are problems, but they seem manageable—and that goes for the effects of the Midwestern drought. Big problems in the Farm Belt no longer have significant impact on the economy.

A closer look at more specific near-term business barometers suggests that things are pretty much under control. Industrial distributor sales have been in a slowly rising trend for over a year now (see chart).

Consumers, while not quite on a spending binge, are doing their part to hold the economy up. Auto sales, at an annual rate of 10.5 million units (see chart), are better than was expected.

Add in truck sales, and it means that Americans bought all types of vehicles in the first half at a seasonally adjusted annual pace of 15.9 million units. Totals for the year could run 15.7 million units—not much under the 16.3 million all-time high hit in 1986.

Other reasons why consumer spending is likely to stay brisk: 1) incomes are growing; 2) rising net worth of households makes consumer debt look less burdensome; 3) consumer confidence remains high; and, 4) interest rates haven't risen enough to cut into borrowing.

Current prime interest rate levels (see chart) aren't any higher than they were last fall. Any increase should be measured in one-quarter and one-half percentage points—hardly enough to change the overall spending ground rules.

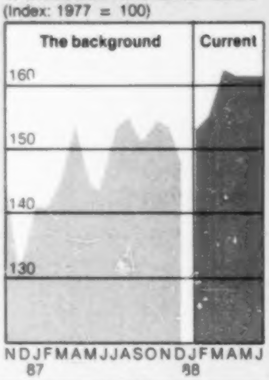
Last, but not least, there's the added cushion of plant and equipment investment. With profits and operating rates up, American industry has apparently raised its capital spending sights.

New machine tool orders in one recent month were at the highest level in seven years. Year-to-date figures for domestic orders are running close to 80% ahead of 1987.

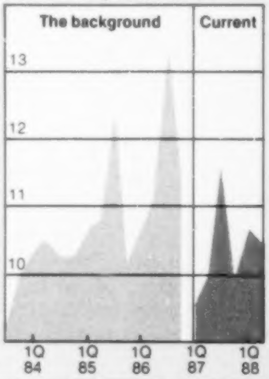
Factor all of the above into the production equation, and industrial output seems a sure bet for further gains. ***Purchasing World***

Leading indicators

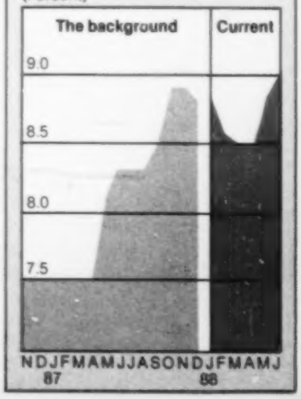
1. Industrial distributor sales
(Index: 1977 = 100)



2. Auto sales
(Mil., seas. adj. annual rate)



3. Prime interest rate
(Percent)



magazine predictions for the remainder of 1988: An advance of near 4% at annual rate—enough to push the overall 1988 production totals 5% above the 1987 average.

More dollars being put into R&D

The nation's top corporate executives are stepping up their research and development (R&D) efforts.

A new DRI/McGraw-Hill survey points to a 6.5% increase this year (to $88.3 billion). And preliminary plans (usually subject to upward revision) call for another 10.8% increase over the subsequent two years.

These dollar figures should leave room for some real gains. R&D prices are targeted to rise about 3% this year—suggesting a 3.5% physical advance in the amount of work being done.

The new numbers are considerably better than the small, under-3% dollar gains reported in 1986 and 1987—figures which turn fractionally negative (-2%) after correcting for prices in both of these years.

Also on an upbeat note, R&D will come to about 3.2% of the sales dollar this year. While not much different from last year, it's better than the 2.1% figures noted during the 1977-1979 period.

As might be expected, the aerospace industry is the leader in dollar outlays ($17.8 billion this year)—with electrical equipment ($17.1 billion) a close second. Other big spenders: Machinery ($13.1 billion), chemicals ($10.9 billion), and automotive ($10.4 billion).

Most of these industries are also leaders in relative terms. Thus aerospace firms are allocating 16% of their sales dollars to R&D this year. Other big R&D/sales ratios are seen for instruments (8.7%), electrical equipment (7.1%), machinery (5.6%), and chemicals (4.7%).

While the above figures are below rates hoped for by analysts, it does indicate American industry is making some effort to regain its competitive edge. But the new report adds that a still more intensive R&D effort is needed—one that would put less emphasis on short-term profits and more on long-term growth.

No near-term slowdown

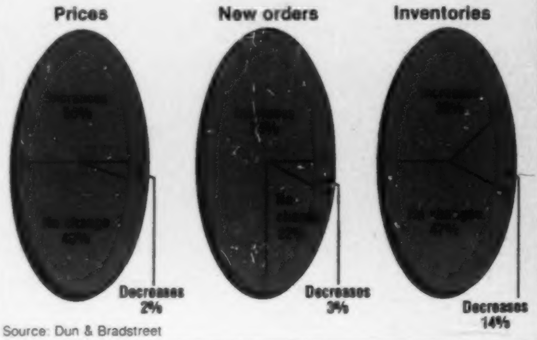
Discount talk of any near-term business slowdown. If the nation's top business executives are right, the current quarter may actually turn out to be better than the last one.

That's what 1,500 corporate executives have been telling Dun & Bradstreet survey takers these days. "Behind the continued optimism", says D & B corporate economist Joseph W. Duncan, "is a combination of a strong export demand and still-healthy levels of consumer spending."

Duncan does voice some concern that rising orders are beginning to put pressure on production capacity, which could drive prices up. As he puts it, "the burden is on the manufacturer to expand capacity in order to ward off inflationary pressures."

Bullish third quarter trends: a vendor perspective

(% of factory executives anticipating changes vis a vis a year ago)



Source: Dun & Bradstreet

This rise in prices is becoming apparent. Specifically, the net 3Q 48% price increase figure (50% anticipating rises over a year ago *versus* 2% seeing declines) is well above the 38% reading of just three months earlier.

One interesting finding: The net upward pressure is most noticeable in non-durables where a 34% reading three months ago has zoomed to 50% currently.

The figures for new orders also highlight the upbeat business climate. More than 70% of both durable and non-durable producers expect an increase in business this summer—outweighing the handful of respondents who look for some fall off.

This improving demand will require some inventory additions. In fact, the number of respondents anticipating a 3Q buildup (39%) is more than twice the 14% planning on declines.

Also on a bullish note, vendor profits are expected to continue improving. Part of this, of course, can be traced to increasing volume and higher prices. But other factors, says D & B's Duncan, are improving productivity and lower break-even levels.

CURRENT PRICES

Don't let food, farm prices fool you

Price averages are being distorted by rising food and farm product tags. Remove these from the overall producer price index and the increase over the past month comes to only 0.4%—in line with earlier 1988 trends.

Moreover zero in on finished products other than foods and the picture is even more encouraging. Latest readings here show only a 0.2% monthly increase—with the boost over the past 12 months put at only 2.4%.

That's not to say that there aren't a few problem areas. Capital equipment has advanced about 3.5%

so far this year, reflecting a substantial pickup in demand. Increases over the past 30 days here have hit pumps and compressors, railroad equipment, paper industry machinery, motor vehicles and civilian aircraft.

On the other hand, there were few offsetting declines in this sector. Lower quotes were posted for power-driven hand tools, precision measuring tools, scales and balances, and integrating and measuring devices.

Metals also continue to act up. Zinc moved up most this past month—but increases were also noted for steel mill products, nonferrous scrap, and some precious metals. Aluminum and copper seem to have finally leveled off.

Building materials are still another advancing area, rising 0.6% over the past month. New hikes here have hit softwood lumber, plywood, paint, nonferrous wire and cable, fabricated structural metal products and heating equipment. These more than offset declines in both gypsum and flat glass.

Prices of component parts also drifted higher. Sparking the advance here were electronic parts (led by higher asking prices for memory chips). Also moving higher were both aircraft engines and electric motors and generators.

A more mixed picture shows up in the energy sector. While increases were noted for electric power, residual fuel and liquid petroleum gas, they were pretty much offset by declines in gasoline, jet and diesel fuels and crude oil.

The latter is of special importance. Other things being equal, it suggests that downstream refined petroleum products should again be in a general declining trend by early fall.

THIS MONTH'S BREAKDOWN

Index: 1982 = 100

	Latest level (June)	% change from: Month ago	Year ago
Bearings	111.9	0.4	4.3
Bolts, nuts, etc.	106.8	0.2	3.6
Chemicals, inorganic	100.6	0.8	7.5
Chemicals, organic	107.1	2.1	8.6
Concrete products	110.2	0.3	0.8
Corrugated cartons	110.6	0.3	10.6
Cutting tools, small	107.0	0.0	0.7
Electric lamps (bulbs)	121.9	0.0	0.9
Electronic components	117.8	1.3	2.8
Fans and blowers	114.6	1.1	3.7
Foundry and forge products	109.6	0.5	4.2
Fuel oil (residual)	43.7	2.6	– 20.7
Furniture, commercial	123.7	0.1	4.3
Gasoline	59.2	– 0.7	– 2.1
Glass, flat	109.1	– 0.5	1.8
Glass containers	112.2	0.1	– 1.0
Gypsum products	110.3	– 0.9	– 13.8
Hand tools	119.8	0.0	3.3
Hand tools, power driven	111.6	– 0.6	2.6
Industrial furnaces	119.7	0.3	4.5
Integrating and measuring instruments	114.4	– 1.5	0.6
Internal combustion engines	110.9	0.0	1.4
Lubricating oil	103.7	– 0.5	5.4
Lumber millwork	122.3	0.6	3.6
Material handling equipment	107.4	0.1	3.2
Metal containers	110.0	0.1	0.3
Metal mill shapes (nonferrous)	128.7	1.6	25.1
Metal tanks	104.6	0.5	9.1
Motors and generators	107.3	– 0.2	1.1
Motor trucks	124.0	0.2	4.0
Office and store equipment	107.1	0.5	2.2
Paperboard	134.0	0.7	15.6
Paper boxes and shipping containers	124.1	0.6	8.2
Paper office supplies	114.4	– 0.2	6.0
Paint	112.2	1.0	3.9
Plastic resins	130.5	0.4	19.0
Precision measuring tools	121.5	– 0.6	4.6
Pumps and compressors	108.6	0.7	3.4
Refractories	114.0	0.2	3.3
Rubber belts and belting	105.6	0.4	1.0
Scales and balances	105.9	– 0.4	2.3
Steel products	111.0	0.5	9.9
Switchgear	113.6	0.6	2.6
Textiles, synthetic fibers	96.8	– 0.2	6.4
Textiles, gray fabrics	114.6	0.4	7.4
Tires and tubes	94.1	0.2	4.1
Transformers and power regulators	107.3	– 0.2	1.1
Welding equipment	118.1	1.2	6.7
Wire and cable	124.0	0.6	20.7

STEEL SCENE

Steel demand leveling

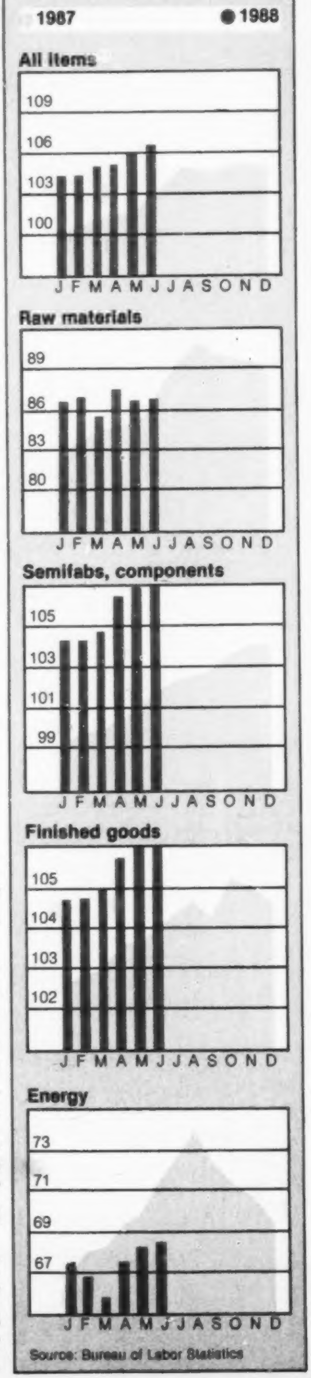
More and more signs are pointing to a leveling off in steel demand.

For one, inventories have been rising on both the distributor and buyer fronts. On a months' supply basis respondents to the latest Steel Service Center Institute (SSCI) survey indicate about a 3¼ month overall supply of steel—up a substantial one-half month from early 1988 levels.

Taking off on this, SSCI President Andrew Sharkey observes, "We expect a reduction in service center purchases until invento-

Industrial prices

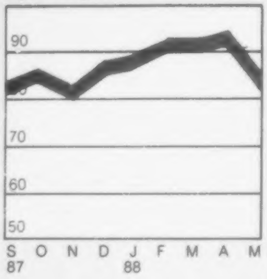
(Index: 1982 = 100)



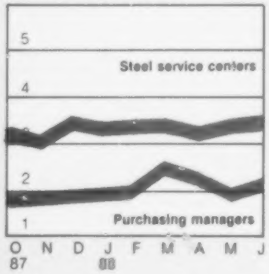
Source: Bureau of Labor Statistics

Steel

Operating rates

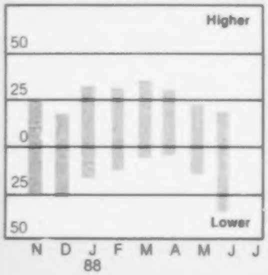


Inventories
(Months supply on hand)

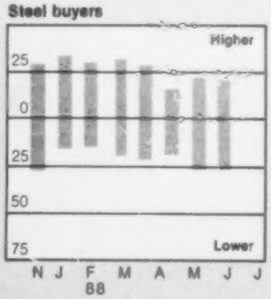


Demand
(Percent of respondents)

Service centers incoming orders



Steel buyers



Import prices
(Compared to domestic)

Steel buyers

ABOVE	73%
SAME	32%
SLIGHTLY BELOW	12%
SUBSTANTIALLY BELOW	0%

Service centers (carbon)

ABOVE	11%
SAME	86%
5-10% BELOW	2%
10-20% BELOW	0%
OVER 20% BELOW	0%

Source: Steel Service Center Institute, NAPM Steel Buyers Committee

ries, now approaching seven million tons, are brought back into line." He also stresses that carbon plate inventories, which have reached a 5.2-month supply, represent the most significant cause for concern.

Buyers responding to the latest NAPM survey report a 2¼ month supply—up a week from levels reported one month earlier.

Given these buildups, it's no surprise that inventory cutting is getting more and more attention. Thus the 55% of purchasing managers planning to reduce stocks over the next six months drowns out the minuscule 3% which still plans on some near-term increase in inventories.

And steel service centers look to be of the same mind—judging from their latest evaluation of inventory levels. Specifically, 54% think their holdings are "too high"—in sharp contrast to the 2% rating them "too low."

Demand projections seem to reflect this more cautious stocking strategy. In any case, the outlook is not quite as rosy as it was a few months back.

Some 41% of queried buyers expect to reduce their purchases of steel over the next three months. That's more than twice as many as those anticipating a step up—and represents the largest negative figure in more than a year and a half.

And again this slowdown is being seconded by distributors. The actual numbers here: 44% anticipate a drop in incoming orders over the next three months—with only 12% hoping for continued gains.

If nothing else, it suggests that the 5% year-to-date shipping gains reported by service centers may shrink a bit before the year is out. Nevertheless, given the fast 1988 start, totals for the year as a whole should easily top 1987's estimated 23 million ton-plus shipment level.

The changing demand patterns do not seem to be altering service center expectations of more price increases. Thus 59% of those surveyed still expect to pay more for their steel over the next six months.

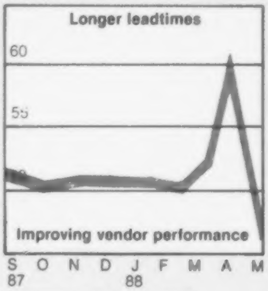
The severity of increases, however, may be ready to slow down. At latest report only 5% expect increases in excess of 5%. That figure has been dropping steadily from the more than one out of four who expected such big hikes as recently as April.

Another possible sign of a more competitive climate: Foreign mills have become marginally more active in seeking U.S. business. But they are still not offering any real price incentive—except in the case of stainless, where about one out of every five distributors reports price

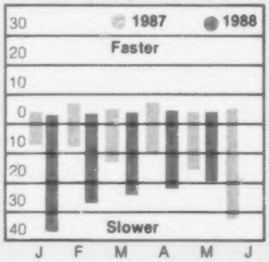
Monthly procurement status report

Leadtime index

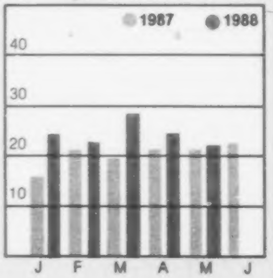
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests imoroving vendor performance.



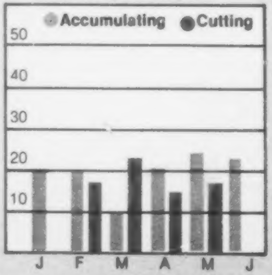
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days or more in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

breaks in the 6-10% range.

Still another reassuring note is the fact that there has been some decline in fears of near-term supply shortages. This is especially true in cold-rolled sheet where things seem to be loosening up.

Overall shipment projections would also seem to support the likelihood of better market balance. Wharton Econometrics, for example, is forecasting shipments of only 19.2 million tons and 18.1 million tons for the third and fourth quarters, respectively. That's considerably under the 21 million tons that cleared the market in each of the last two quarters.

PROCUREMENT STATUS

Leadtime index drops below 50

Leadtimes actually managed to come in a bit over the past month—thanks to modest improvement in the steel and electric/electronic spheres (see table).

The drop in leads could prove to be temporary—more a function of the normal summer demand slowdown than any underlying shift in the overall procurement climate.

The majority of PMs surveyed this month feel that the current dip (*PW's* exclusive leadtime index dropped under the neutral 50 level for the first time in nearly a year) could be reversed by September or October .

Another sign that things really haven't loosened up all that much: The still-significant percentage of PMs (23%) who continue to commit for their production materials 90 days or more in advance.

Also indicative of an endemic availability problem: The long list of items on NAPM's short-supply list.

In the metals area, hard-to-get products now include aluminum (ninth consecutive month), nickel (four months), steel (15 out of the last 16 months), stainless (six months), steel sheet (14 months), and steel plate.

The chemical short-supply list is equally impressive: Caustic soda (13 months), styrene, polyethylene (two months), plastic resins (two months), ethylene oxide (four months), ethylene glycol, ethylene, ethylene derivatives, phenol (three months), methanol (seven months)

Electronic dynamic random access memories (DRAMs)—notably the 256K and 1-megabit types—are also listed for the fourth straight month.

LEADTIMES (in weeks)

	Month ago	Latest month
CHEMICALS-PLASTICS		
Adhesives	3	3
Naphthalene	2	2½
Paint	3	3
Paint, Coil Coating	3	3
Paint, Maint.	2	2½
Polyester Resin	2	1
Polyethylene Resin	4	4½
PVC Resin	5½	5½
Titanium Dioxide	1½	2
ELECTRICAL & ELECTRONIC		
Cables	8½	8½
Circuit Breakers	4	4
Electromech. Devices	7	7
ICs (Linear)	8½	9½
Motors, Fractional Horsepower	14	12
Motors 1-10 HP	13	11
Motors 10 HP & Up	12	11
Relays	8	8
Transformers	10	10
LUMBER		
Hardwood	2½	3
Plywood	3	3
Softwood	2	2½
Particleboard	3	3
OFFICE PRODUCTS		
Copiers	2	2
PCs Workstations	4	4½
Facsimilies	3	3
Pre-printed Form	4	4
Elex Typewriter	3	3
Furniture	4	5
Printers	3½	3½
Telecommunications	7	8
PACKAGING		
Bags, Kraft	4	4½
Bags, Multiwall	6	6½
Cartons, Corrugated	2	2½
Cartons, Folding	2	2½
Cellophane Wrap	4	4
Plastic Bags	2	5
Plastic Pkg.	4	5
Shrink Film	3½	2
Drums, Fiber	2	2½
Drums, Steel, Std.	2½	2½
Wood Pallets	3	2½
Wirebound Boxes	4½	4
Strapping	2½	2½
PAPER		
Fiberboard	4	4½
Glassine	5	5
Groundwood	5	5
Kraft	2	2½
Kraft, Bleached	3	3½
Kraft, Natural MFNS	1	1½
Laminated	6	7
Tissue	5	5
NONFERROUS METALS		
Aluminum Coil	15½	15
Aluminum Plate	21	21
Aluminum Sheet	18	17
Brass Castings	8	8
Brass Rods	8½	8
Brass Sheet	8½	8½
Brass Tube	8	8½
Copper Fittings	2	3
Copper Mill Prod.	6	5½
Copper Tube	4	4½
Lead	4	4½
Magnesium	3	3
Manganese	8	8
Nickel	3	3½
Silicon	1	1½
Tin	2	2½
Wire, Specialty	4	4½
Zinc	3½	3½
MISCELLANEOUS		
Bearings, Domestic	5½	6½
Bearings, Foreign	16	16
Fasteners	6	6
Fasteners, Std.	2	2½
Insulation Mat'l.	7	7
Machined Parts	5½	6
Pipes & Valves	4	4
Rubber, Synthetic	2	2
Rubber Hose	4	4
Tungsten Carbide Parts	14	14
Valves, Cast Steel	5	5
Welding Supplies	2½	2½
STEEL		
Cold-Drawn Bars	3½	4
Cold-Rolled Sheet	11½	11
Forgings	11	11½
Galvanized	3	3
Grey Iron Castings	9	9
Hot Rolled Bars	3½	3½
Pipe, Carbon	4	4½
Plate	11½	10½
Sheet	14	13½
Sheet Castings	7½	8½
Structurals	10½	9
Tubing	6	6½

Figures represent the average leadtimes from various locations.

SURVEY of the Month

Better control keeps inventories lean

Inventory restraint is the order of the day—as far as purchased materials stocks (the bailiwick of industrial purchasing managers) are concerned.

Stock/sales ratios in the key durable goods area are at their lowest level in years. And, purchasing executives responding to a new nationwide *PurchasingWorld* magazine survey indicate they mean to keep it that way.

The reasons behind this "keep'em lean" strategy are: 1) topside pressure; 2) high inventory carrying costs; and, 3) better inventory controls, with the assistance of just-in-time deliveries.

Not even the tightening of supplies in some sectors is making for any change in the overall inventory numbers. As one steel buyer puts it: "Sure, we know it takes a bit longer to get delivery these days. But, rather than ordering more we're ordering earlier—hoping our estimated delivery times are accurate."

Repeat this reasoning around the country and it spells a radical change from previous business cycles when stocks were gradually built up to the point where they provoked the traditional inventory correction.

And this could be one reason why most analysts remain optimistic about the next few quarters. Specifically, lean inventories assure continued economic gains as new orders are satisfied by new production rather than by the drawing down of existing stocks.

Buyers are also relatively pleased about the current situation. Thus about two out of every three surveyed PMs say their inventories are just about right. This is all in sharp contrast to similar surveys taken two and one years ago when 90% and 56% of the respondents, respectively, felt their holdings were "too high."

One reason could be that they have already made significant progress in paring stocks over the recent past. Close to half of the queried buyers say days' supply is lower now than at the beginning of the year.

True, some tonnage gains are anticipated by nearly two out of every three respondents over the next six months. But these people add that the increases will be modest and in line with expected sales gains. Implication: days' supply will stay where it is now.

However, a fair number of purchasing executives (35%) admit to some hedging to beat price hikes. This is not surprising. It makes a lot of sense given the number of items that have been moving up in price.

On the other hand, not one PM says he's adding to stocks because of strike fears. This represents a departure from earlier surveys where a substantial number of buyers factored possible work stoppages into their procurement strategies.

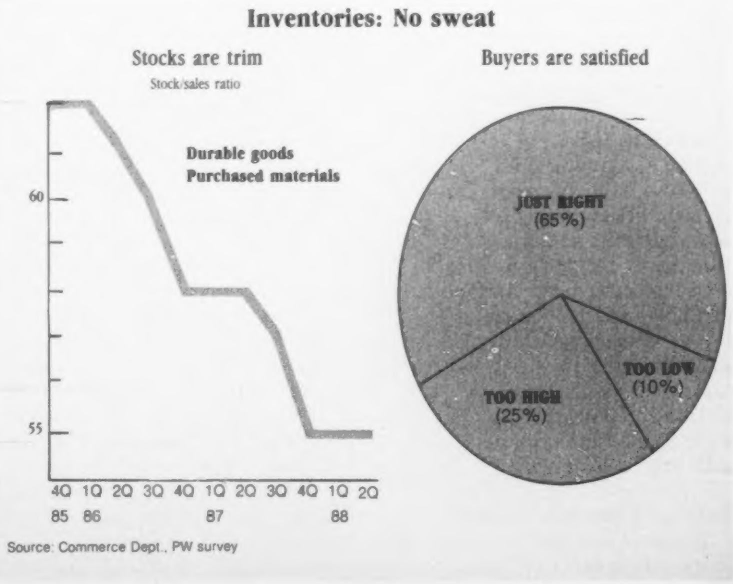
That's not to say that buyers don't have other problems. About 40% feel leadtimes could stretch out a bit more over the next few quarters, especially in the chemical, plastics and specialty steel areas. But, as noted, that is being taken care of by advance ordering rather than by any increase in inventory totals.

The resolve to keep stocks down is also emphasized by the fact that one out of four respondents say they have already implemented some sort of just-in-time policy. The majority who have not indicate they're working on one.

Other hold-the-line approaches include more computerization, increasing use of blanket orders and long- term contracts, improved sales forecasting, and closer vendor-buyer liaisons.

The latter is getting added impetus from the just-in-time approach which, by necessity, requires closer working relationships. But even where JIT is not a consideration, more and more PMs are becoming convinced better communications is the wave of the future.

As one Midwestern PM sums it up, "It's a symbiotic relationship—one which is increasingly important, indeed crucial if we're to stay alive in what is becoming a competitive one-world economy." **PW**



Inventories: No sweat

Stocks are trim

Buyers are satisfied

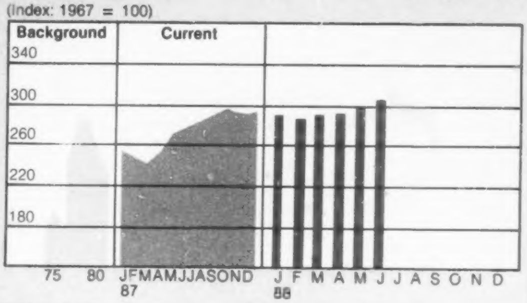
Source: Commerce Dept., PW survey

BUSINESS DATATRAK

Raw material price barometer

Latest month 309.7
Month before 301.6
Year ago 276.4

(Index: 1967 = 100)



LATEST SPOT MARKET PRICES

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	16.50
Steel, bars, Pitts., cwt.	16.50	16.50	16.50
Steel, bars, C.R., Pitts., cwt.	19.55	19.45	19.45
Steel, plates, Pitts., cwt.	22.75	19.75	19.75
Steel, plates, H.R., Pitts., cwt.	22.75	19.75	19.75
Steel, sheets, C.R., Detroit, cwt.	28.15	28.15	26.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	1.22	1.260	.725
Antimony, N.Y., dealer, lb.	.95	.98	1.15
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	1.71	1.80	1.41
Brass, yellow, [sheet], lb.	1.66	1.75	1.36
Cadmium, N.Y., dealer, lb.	8.00	8.00	1.50
Copper, electrolytic, wire bars, refd., lb.	1.07	1.16	.77
Copper sheet, over 24 in., lb.	1.79	1.88	1.50
Lead, common, N.Y., lb.	.36	.36	.40
Magnesium, pig ingot, [99.8%], lb.	1.58	1.58	1.53
Mercury, 20 fl. lots, N.Y., fl.	370.00	355.00	295.00
Molybdenum, oxide, dealer, lb.	3.39	3.50	2.58
Nickel, cathode, dealer, lb.	6.60	7.05	2.18
Platinum, dealer, oz.	543.00	574.00	559.00
Silver, N.Y., oz.	6.97	7.01	7.65
Tin, N.Y., dealer, lb.	3.32	3.31	3.09
Zinc, Prime West, East St. Louis, lb.	.66	.63	.46
Zinc, die casting alloy, No. 3, lb.	.735	.675	.525
PAPER			
Uncoated book #3 offset, ton	920.00	920.00	860.00
Watermarked bond, ton	1070.00	1070.00	985.00
Gummed sealing tape, carton	17.71	17.57	16.96
Grocery sacks, ton	455.00	455.00	390.00
Solid bleached paperboard, ton	685.00	685.00	620.00
Kraft linerboard, 42 lb., unbleached, ton	410.00	410.00	350.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.276	.285	.243
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.22	1.22	1.22
Cotton middling, 1", N.Y., lb.	.577	.644	.719
Printcloth, 48", 80x80, N.Y., spot. yd.	.490	.510	.660
Army duck, 37", 13 oz., yd.	1.510	1.510	1.495
Blended printcloth, 64", 78x54, yd.	.65	.64	.91
20s combed yarns	2.00	2.00	1.97
Wool 64s, Staple, lb.	4.50	4.50	2.70

	Latest price	Previous month	Year ago
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	100.00	100.00	105.00
Benzene, petroleum, tanks, Houston, gal.	1.08	1.05	1.35
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.735	.685	.910
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.55	.55	.30
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.350	.340	.295
Polyethylene resin, low density liner film grade (market place), lb.	.465	.465	.315
Polypropylene, homopolymer grade (market price), lb.	.515	.515	.400
Polystyrene, general purpose grade (market price), lb.	.600	.590	.530
Polyvinyl chloride, pipe grade (market price), lb.	.420	.420	.340
Soda ash, 58%, light carlots, cwt	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.450	.450	.425
Sulfur, crude, ex-terminal, Tampa, Fla., lt.	127.50	127.50	134.50
Sulfuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.870	.870	.770
Xylene tanks, gal.	.870	.870	.900
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	330.55	329.30	329.30
Lumber 2x2 pine, mbf, cl	321.85	326.15	324.65
Plywood, plyform, ¾", msf, cl	578.60	578.70	580.75
Plywood, ⅝", msf, cl	412.45	413.45	384.15
Cement, bulk, ton, tl	66.39	65.02	64.35
Sand, ton, cl	7.43	7.32	7.21
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.01	49.10	49.08
Crushed stone, 1½", ton, cl	8.57	8.50	8.33
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.91	0.93	0.90
Gypsum sheathing, ½"x1"x8", msf, tl	228.43	228.43	238.77
Brick, common, per thousand, tl	218.88	204.91	198.26
Asphalt paving, AC-20	121.95	128.37	132.72
Concrete sewer pipe, 12", prem. joint, per foot, cl	7.58	7.58	7.48
FUELS			
Crude oil (W. Tex Int Cush), bbl.	14.70	16.45	21.60
Diesel (reseller rack, Chi), gal.	.4275	.4625	N.A.
Fuel oil No. 2 (N.Y.), gal.	.4040	.4425	.5500
Fuel oil No. 2 (Gulf spot), gal.	.3900	.4150	N.A.
Fuel oil No. 6 (N.Y.) contract cargo, bbl.	15.75	16.00	N.A.
Gasoline (reg lded NY), gal.	.6125	.5200	.5675
Gasoline (reg unlded NY), gal.	.5900	.4975	.5500
Kerosene (reseller rack, Chi), gal.	.4750	.5050	N.A.
Propane (Mt. Belviu, Tex), gal.	.1900	.2325	.2525
SCRAP MATERIALS			
Steel, No. 1, hvy. dlvd., Pitts., ton	102.00	104.00	83.00
Steel, No. 1 hvy., dlvd., Chi., ton	120.00	108.00	78.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.885	.970	.705
Copper, No. 2, East, wholesale buy, dlvd., lb.	.780	.880	.620
Brass, red, East, wholesale buy, dlvd., lb.	.845	.930	.665
Brass, yellow, East, wholesale buy, dlvd., lb.	.470	.425	.345
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.655	.680	.455
Alum., mixed clip, E., wholesale buy, dlvd., lb.	.730	.750	.510
Zinc, old, East, wholesale buy, dlvd., lb.	.240	.240	.200
Lead, clean solids, East, wholesale buy, dlvd., lb.	.220	.220	.275
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug box, dlr., Chi., ton	20.00	15.00	45.00
Paper, old corrug box, dlr., N.Y., ton	10.00	5.00	25.00
Old newspapers, Chi., ton	10.00	15.00	N.A.
Old white ledger, Chi., ton	85.00	75.00	N.A.

[Sources: Metals Week, American Metal Market, Engineering News-Record (20-city averages), Wall Street Journal, Journal of Commerce, Chemical Marketing Reporter.]

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Major issues in transportation

Software review: part II ▪ Rough year for metals buyers

NAPM upgrades seasonal indicators

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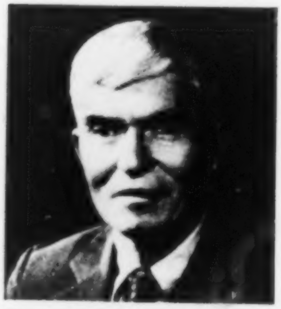

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77 Put a fax board in your PC

Columnist Jeff Pinkerton points out that you can turn your PC into a fax machine with very little difficulty or money.

PurchasingWorld

Need a 146-foot long super-payload truck?

Capable of legally transporting extremely heavy payloads over highways is the 146-foot long air-ride trailer from Art Brockman Inc. A rear-mounted hydraulic steering platform controls three pivot turning joints allowing this giant to turn corners or position itself in even the tightest places for easy loading.

This rig spreads the load over 18 axles and 70 wheels. It is certified by individual states for "super load" capabilities. **Circle 295**

21st survey updates corporate employee relocation policies

Corporate relocation policies are becoming more liberal, with greater provisions being made primarily in the area of home sale and home purchase assistance, according to the 21st annual survey on the topic produced by Atlas Van Lines. The 62 question study, which examines trends and practices related to relocation of employees, is the longest running survey of its kind. For a free copy of the survey, **Circle 296**

Personalized diskettes are offered to quantity users

Customers can have their own logo or identification custom-imprinted on the outer jackets of high-quality computer diskettes under the "Personalized diskette program" from 3M Co. The program includes 8" and 5.25" diskettes and 3.5" microdiskettes in all data storage capacities.

Alan Henaman, market development manager for 3M diskette products, says of the program: "There's the positive image for an organization using diskettes that display its official name or symbol. There's positive protection because diskettes marked with the company's imprint are more likely to stay on the premises, or be returned if they are removed. But most importantly, there's the positive identification this program provides for an organization's computer property and the data it contains."

The minimum quantity for total orders is 10,000; a minimum run of 5,000 for individual items. **Circle 260**

Custom fabricated metal components out source

Compression, torsion and extension springs, plus wire forms, stampings and assemblies are available from custom manufacturer Spring Engineers, Inc., Dallas. The firm offers a full range of services including material selection assistance, spring design, tool and die work, heat treating, finishing and special packaging.

Spring Engineers specializes in cobalt, nickel and titanium-based "Super" alloys, and is one of the largest buyers of these exotic alloys in the world. Many buyers take advantage of the firm's large inventory by placing blanket orders at quantity prices and drawing upon it is as needed. **Circle 69**

Boston is site of 1989 NAPM Conference

The largest professional association of purchasing and materials management personnel, the National Association of Purchasing Management, will hold its 74th annual International Purchasing Conference April 30 through May 3 at the Marriott and Westin Hotels, Copley Place, in Boston.

The event is expected to draw more than 2,000 practitioners for four days of workshops, professional development seminars, panel discussions and plenary sessions focusing on the theme, "Revolution in Purchasing and Materials Management." A 60-booth educational exhibit and several pre-conference seminars will also be featured.

The Purchasing Management Association of Boston, NAPM's largest local affiliate, will host the event. General conference chairman is Richard Miranda, C.P.M. of Multi-Bank Financial Corp. **Circle 66**

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by Robert S. Reichard, executive editor

No fears on price front

Prices may be moving up at a faster pace than a year ago, but there's little evidence to support projections for big near-term advances.

Much has been made of low unemployment rates and their impact on wage costs. But nothing really significant has happened here. Private industry's labor bills have gone up only 4.5% over the past 12 months—not much more than the 3% increase of the previous year. Also reassuring: Wages of workers covered by major contracts signed during the first half of 1988 will rise an average of only 2.6% in the first year of the pacts.

One possible reason for this restraint is the wave of restructuring that has hit U.S. industry in recent years. Since restructuring often means lost jobs, workers now worry more about job security than pay hikes.

Wage costs are also being held in check by a still-rising productivity offset—at least in the crucial manufacturing sector. Factory efficiency grew at a 3.2% and 3.5% annual rate in the first and second quarters, respectively. Upshot: Factory unit labor costs have advanced at only a 1.5% annual rate so far this year—hardly the climate usually associated with spiraling price increases.

And labor isn't the only good news on the price front. Equally important is today's anti-inflationary financial environment—namely a declining rate of growth in money supply over the past few years. This could be the reason for still-low inflation rates. It's all in sharp contrast to the last decade when a rapidly growing money supply coincided with 5% and higher annual price advances.

The oil situation also has to be considered a moderating price force. Global petroleum output has consistently exceeded demand in recent months. And the existing glut is likely to grow even bigger as Iran and Iraq seek funds to rebuild their devastated economies.

Even the "drought effect" has been overblown. At most, it will mean a 1-2% increase in food costs over the next 12-18 months. And since food is only a small portion of the economy, the overall impact on inflation should be minimal.

Don't forget the somewhat improved dollar. The leveling off here *vis a vis* such currencies as the Japanese yen and German mark suggests that the steady stream of import price boosts may soon be coming to an end. Indeed, look hard enough and some slight deceleration in the rate of advance in import tags can already be discerned.

Also encouraging is the leveling off in raw material quotes. Some metals, plastic resins, and chemicals are at peak levels. But the point to keep in mind is they are no longer rising—at least not on an across-the-board front. This, too, should help put a limit on future price advances.

Finally, there are the vendors themselves. Faced with global competition for both domestic and foreign markets, they are likely to think twice before raising prices. There is already some evidence to back this up. Recent domestic increases in the auto and machinery areas have been moderate, as those suppliers pass up the quick buck and opt to recapture markets from their overseas competitors.

Put all the above into the price forecast equation, and it's easy to see why policy makers like Alan Greenspan of the Fed remain optimistic about limiting near-term price increases. His latest projection for the all-inclusive GNP price deflator calls for a rise of only 2.75-3% this year—and a slightly higher 3-4.5% advance.

Import price increases greater than U.S. averages

Add another few percentage points onto import prices—with the average incoming tab (excluding the volatile fuel component) moving up another 2.3% over the latest 3-month period.

All told, these prices—as reported by the Bureau of Labor Statistics—are up an eye-opening 8.7% over the past year. That's double the 4% advance noted in overall domestic producer prices over the same 12-month period.

About the only positive sign in the latest report was that the rate of advance seems to be slowing down. Six and three months ago, the import price boosts were 2.8% and 2.4%, respectively.

Here's a more detailed rundown of latest quarterly changes on a sector-by-sector basis:

Crude materials: Prices—spearheaded by rubber, metal ores, pulp, and textile fibers—jumped 6.7%. This follows a 5.8% first quarter increase and brings the 12-month advance to 18.6%.

Chemicals: A modest 1.8% boost was recorded—well under the 4.3% and 3.7% hikes of the previous two quarters. Drugs moved up the most (3.7%)—with organics and inorganics advancing only 1.4% and 0.3%, respectively.

Intermediate manufactured products: Averages, led by metal tags, moved up 5.8% this past quarter—somewhat more than the 3-4% boosts of the previous four quarters. Blame the acceleration on nonferrous metals—up 6.5%, and iron and steel—up 6.0%. But prices for paper and paperboard items slowed down.

Machinery: Average boosts slowed to 1.5%—following increases of 1.9% and 2.7% in the previous two quarters. Small increases hit road vehicles, electrical machinery, metal-working machinery, general industrial machinery and specialized machinery.

Change coming in forms

Look for some dynamic changes in the $8 billion U.S. business forms industry over the next five years.

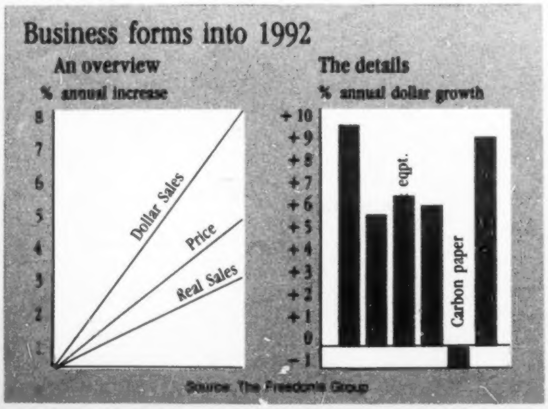
So predict analysts at Cleveland's Freedonia Group, who attribute the projected shifts to a combination of factors, namely 1) the growth of personal computers and associated printers, 2) high paper prices and scarce supplies, and 3) advances in printer technology and other means of information transfer.

As for the actual changes forecast—they include a move toward more simplified forms, greater use of carbonless paper in multiple part forms, more value-added products, (often involving the jobbing out of orders to specialized manufacturers), greater technical servicing, and a trend toward short-run orders.

As for demand, Freedonia analysts are betting on a 3% real growth per year through 1992. Add in an estimated 5% annual price advance, and the current dollar boost is likely to be around 8% a year—enough to push total sales to $12 billion by 1992.

On a product-by-product basis, biggest gains (9.7% a year in current dollar terms) are seen for continuous forms. Manifold books will show a 9.1% advance—with somewhat smaller 5-6% annual dollar increases expected for unit-set forms, loose leaf binders and associated equipment, and inked ribbons. But a 2% decline is seen for carbon paper.

Marketing, should be playing an increasingly important role—due in large part to the shift to smaller volume orders and the widespread use of computers by small businesses. Then, too, there could be a shift away from the use of supplier in-house sales forces—and toward marketing through computer clubs, catalogs, direct computer ordering systems, telemarketing, direct mail, and aggressive independent sales forces.


Business forms into 1992

Source: The Freedonia Group

Office space still buyers' market

The buyers' market in office space isn't about to end. On the other hand, bargains may be a bit harder to find as overall vacancy rates drop two percentage points under last year's 21.5% all-time high. Most of the decline has been in the suburbs—as downtown availability remains unchanged. Industrial vacancies are holding in the 6% range—little changed from earlier readings. Reason: Most of today's capital spending emphasizes productivity-enhancing equipment rather than the purchase of additional plant space.

Robots ebb

Demand continues to disappoint—with shipments at latest report sinking to the lowest level in four years. With the auto market effectively saturated, there is apparently very little interest on the part of other industries. Not much price inflation here either—as U.S. vendors face stiff competition from the Japanese. Some modest demand gains could lie ahead as robotic vendors begin to integrate vision systems into their products.

Paper prices slow

The across-the-board increases of the first half seem to be slowing down. Moreover, newsprint prices won't go up in October and maybe not even in early 1989. Sign of the times here: Spot discounts of 15% or more. Another linerboard boost also

Titanium increases continue

Another 3% is being added onto alloy sheet and plate, commercially pure plate, and billet products. The only consolation: A first quarter 1989 effective date. Unfortunately, that will be followed by another 2% increase next spring. All told, prices for this important metal have jumped a hefty 25% since last summer. Behind all these increases: Higher raw material costs and strong demand. Shipments are up some 13%—sparked by increased buying from the aircraft, paper, and chemical industries.

Ethylene glycol in tight supply

Figure on a fourth quarter increase. That's on top of the 10-15¢/lb advances that went into effect in July—boosts which brought the antifreeze grade up into the 45-50¢/lb range. And there's talk of tight supplies continuing into winter—with little opportunity for any inventory rebuilding until next spring. Behind the snugness: Good demand plus a series of refinery explosions which took a big bite out of the supply.

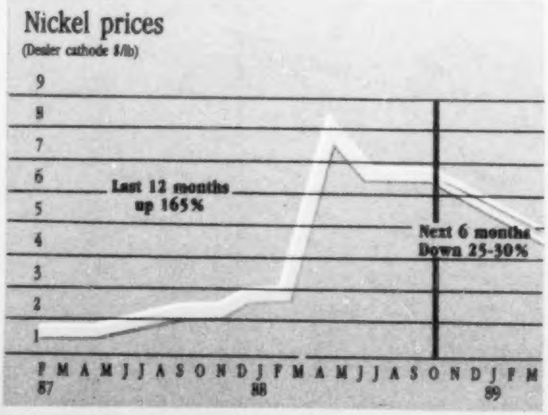
Nickel quotes run high above 1987

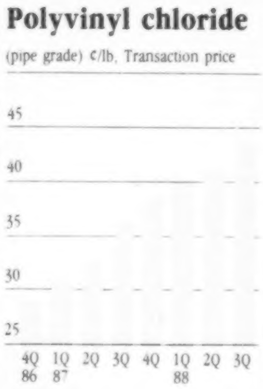
CURRENT SITUATION: Prices have been the big story for this key alloying and plating metal. Starting from a low point of about $1.75/lb. last spring, quotes soared to an all-time high of near $8.40/lb. a few months back. Some slippage has occurred since then, but not enough to prevent quotes from remaining close to 300% above last year's low. **Behind the early 1988 runup: A sudden surge in global demand to new peaks.**

DEMAND: Global consumption looks to be up by nearly 5% this year—reaching a record 660,000 metric tons. One major factor: The booming stainless steel end-use market which, sparked by a capital equipment boom, could be up by an even more impressive 7%. Alloy steel demand also remains strong—with support from the engineering, oil and gas, and construction sectors. Other end-use areas of strength: Aerospace, plating markets, and coinage.

SUPPLY: Latest estimates suggest a 36,000 metric ton global deficit this year. Specifically, Free-World production of 564,000 tons plus 30,000 tons of imports from the Socialist world will still fall short of estimated consumption of 660,000 metric tons. **Upshot: Producer inventories by year end could be down to a low 5-week supply.** And even this presupposes new work stoppages in areas where new contracts are up for renegotiation.

PRICE OUTLOOK: A gradual softening seems to be in the making as markets slowly come back into better balance. But don't expect any tumble to the $2/lb average of the 1985-87 period. **Best bet by early next year: A price near $5/lb**—assuming, of course, no new labor interruptions. And by the end of 1989 (when a small surplus is expected to develop) a further decline to near $4 can't be ruled out.





Pipe grade PVC prices should hold

A new 2¢/lb increase for PVC to around 44¢/lb should hold. Behind the boost: Tightness and rising prices in two key raw materials—as ethylene and vinyl chloride monomer tags are up 54% and 12%, respectively, since the beginning of the year. The polymer is fairly tight, too, as operating rates remain in the 90%-plus range for the second straight year. Things should begin to ease up as the PVC industry adds nearly 20% to its production potential over the 1988-90 period.

Tool steel still bullish

No sign of change in this bull market—one sparked by strong demand in durable markets and reduced foreign competition. Leadtimes for the metal (used for stamping machines, making dies and molds, and for cutting other steel) are particularly troublesome—with today's typical 18-20 week wait nearly double the normal level. Moreover, projections point to continued strength through fall and winter and into early 1989. Prices have moved up twice so far this year—with some popular grades up nearly 14% over this period.

Communications tags down

Some tags are still heading down. This is especially true of business phone costs where averages dropped another 0.4% in the second quarter—enough to bring the total decline to 23% since the Bell System restructuring in 1984. And in another sphere, GE Information Services has sharply reduced its fees for transmitting information from one EDI network to another. Compuserve, a relatively new player in the market, is offering new users 3 months of service free, eliminating monthly subscription fees and establishing low-cost connections with other networks.

Computers up and down

A mixed picture here. On the downside, Amdahl has knocked 10-14% off its mainframes to better compete with IBM models. On the other hand, the firm is following IBM's lead in raising prices on some maintenance contracts by 5%. Also in the maintenance area, IBM has decided to offer maintenance for customers with other-than-IBM equipment. The only prerequisite—for signing on with IBM: You must have a regular IBM maintenance agreement covering IBM equipment and an IBM CPU somewhere in the loop ranging in performance from its System/36 to its biggest 3090 mainframe.

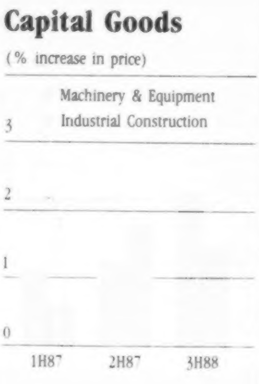
You'll pay more for components

Be prepared to pay 2-25% more for memory boards. The rise in this key product—used to expand the capabilities of basic-model computers—can be traced to the recent price surge in dynamic random access memory chips. Nor are DRAMs the only problem in the component area. There's also a world-wide shortage of static RAMs—and prices here could continue to edge up. EPROM chip quotes seem to have stabilized after an almost 20% advance over the past year and a half.

seems uncertain as the industry continues to digest increases which have brought prices up a hefty 28% since early 1987. On the other hand, a few increases are still being reported—including one in solid bleached folding carton grades (up $55/ton—to $730/ton) and another in coated bleached bristol grades (up $40-50/ton).

Capital goods pick up

The price pace for machinery is beginning to pick up a bit according to a new survey by the Kemper Group. All told, equipment tags rose 2.2% during the first six months of the year—(or 4.4% at annual rate) close to double the pace of the previous six months. More important, the current rate of advance is expected to spill over into the second half—fed by recent dollar weakness and a pickup in demand. Industrial building costs were still advancing at a relatively low 1.5% rate over the latest six month period—thanks to relatively stable material and labor costs.


Capital Goods

(% increase in price)

ABS resins advance

Add another 4-5¢/lb onto the popular plastic—with transaction quotes for the pipe grade now at 87-92¢/lb. Compared to a year ago, the plastic has jumped an even more impressive 18-19¢/lb. Blame the advance on booming demand (expected to be up 4% this year on top of last year's 12%). Supplies though remain fairly ample.

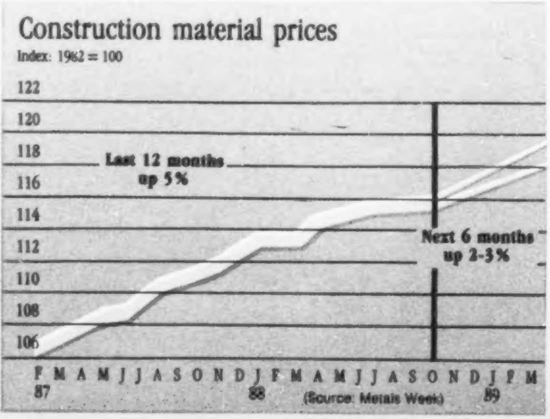
Construction trend pushes prices up, too

CURRENT SITUATION: A fairly good year-to-date construction pattern has helped push tags up an average of 5% above a year ago. But there have been none of the big price swings that have characterized earlier years—primarily because supplies have generally been ample. Here's how individual product quotes have advanced *vis a vis* a year ago: Structural steel (4.5%), lumber (1.5%), cement (2%), sand (5.5%), crushed stone (3%), gypsum (no change), plywood (2.5%), brick (10%), and concrete sewer pipe (7%).

DEMAND: Some leveling off is anticipated this fall—reflecting the negative impact of higher mortgage rates on overall construction activity. Housing starts this year are expected to fall more than 100,000 units (to 1.5 million) and hold at these levels through 1989. This suggests little near-term demand buoyancy. **Lumber and wood** output could be off 4-5% this year—with **paving and roofing materials** following a similar pattern.

SUPPLY: No serious problems are anticipated. That's true even for steel, where earlier fears of spotty tightness in structurals has all but disappeared. Also nothing but an unpleasant memory: Last year's shortfall in flat glass. Elsewhere, the relatively small price impact of a Pacific Northwest lumber and plywood strike would seem to attest to the still ample supplies in these areas.

PRICE OUTLOOK: Continued less-than-sensational demand over the next six months suggests only a 2-3% overall advance over this period. Moderation is likely to persist into next summer—with these 12-month (3Q 1989 *versus* 3Q 1988) increases anticipated. Flat glass (3%), softwood lumber (2%), insulation materials (4.5%), building paper (5%), paving and roofing materials (5.5%), and wire products (5%).

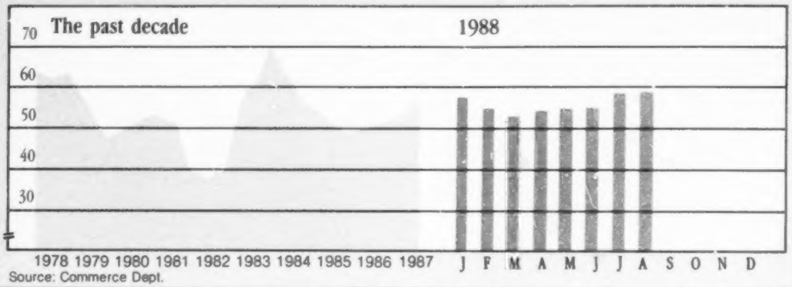

Construction material prices

Index: 1982 = 100

(Source: Metals Week)

N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)



Source: Commerce Dept.

KEY ECONOMIC TRENDS

Government stats point to growth

Discount talk of any near-term business slowdown. Indeed, judging from the latest batch of Washington statistics, the next few months could turn out to be as robust as the last few.

Certainly the leading barometers bear this out. The widely monitored NAPM yardstick (see accompanying chart) remains well above the neutral 50 mark—virtually assuring another few months of solid advance.

Plant managers seem to agree. A new Dun & Bradstreet survey found that 46% of these factory executives expect output to continue to rise—and only 14% see a near-term decline.

Another plus: Inventories, which held back growth earlier this year, are now in pretty good shape. There are a few exceptions like steel, but most stocks are quite trim.

If there's any doubt on that score, take a look at the latest factory stock/sales ratio. It's now at the lowest point on record, suggesting that any new orders will quickly be translated into new production.

And these new orders certainly seem to be coming in. In the latest reported month, new factory bookings ran nearly 5% ahead of month-earlier readings—although it should be noted that some of that gain reflects a one-time surge in aircraft and defense orders.

Orders for plant and equipment seem to be in solid uptrend, as corporations step up their capital spending plans. Particularly encouraging are orders for machine tools which are now at their highest level since the 4Q 1980. Because these tools are used to shape most metal parts, they are a decent barometer of plant spending by producers of durable goods.

Export orders are also doing extremely well, reflecting the impact of last year's dollar decline *vis a vis* other currencies. Actual exports are up strongly as well—real volume of outgoing shipments are now running 19% ahead of a year ago.

Further confirmation of the export boom comes from the NAPM Business Survey Committee. New figures show that of the 70% of companies which export, 39% reported increases in orders from abroad over the past month.

In the meantime, consumers are still in a spending mood. Note from the chart that the savings ratio remains quite low compared to the levels of a few years back.

One reason for this, of course, is a continuing high level of confidence fostered by solid consumer income gains. On the latter score, real disposable income is up a solid 4% over a year earlier.

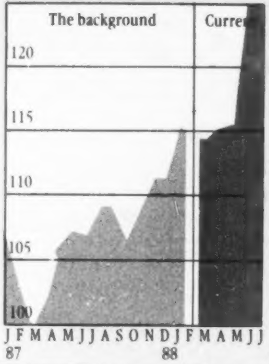
The current rise in interest rates isn't likely to put much of a crimp in such spending, either. Reason: The rate increase is not all that great.

On the other hand, higher interest charges could slow housing activity a bit—an area which in recent months has managed to stage a modest recovery

Leading indicators

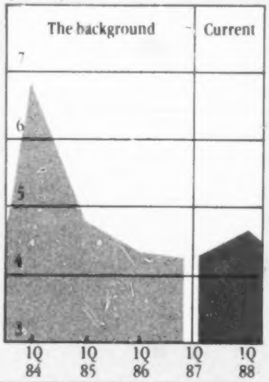
1. Durable goods orders

(Billions, seasonally adjusted)



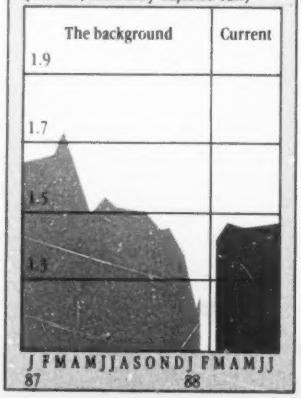
2. Savings Ratio

(Percent)



3. Housing Permits

(Millions, seasonally adjusted rate)



from beginning-of-year lows. If nothing else, rising mortgage costs will prevent any further recovery to the highs of early last year (see chart).

Even so, overall construction won't have that bad of a year, primarily because industrial construction continues to advance. Still-strong overall construction figures—close to last-year's levels—also indicate that the construction industry is not about to fall out of bed.

Boom straining factory capacity

The production boom (industrial output at last report was running 6% ahead of a year ago) is beginning to strain the capacity of the nation's factories.

Lest there be any doubt on this score, take a look at the accompanying chart. It shows the overall factory operating rate rising above the 83% mark—up four percentage points from the low point hit two years ago.

And what's true of the overall average also holds for most subgroups. Thus the industry-by-industry rundown accompanying the chart points to increased utilization in all areas except textiles. The biggest increases are in some of the critical sectors—notably metals, chemicals and machinery.

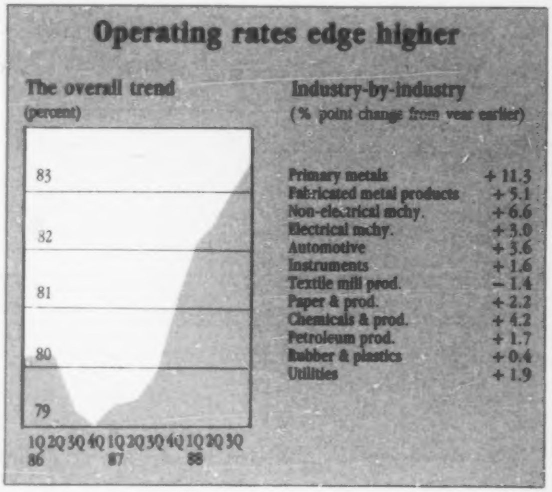
An 83% average factory utilization rate is still tolerable (85% is normally regarded as the crossover point where shortages become endemic) but it does suggest something that will bear close watching.

Fortunately, the nation's top executives have been raising their capital spending sights—with plant and equipment expenditures this year expected to be up 10%. So some relief is on the way.

Also reassuring are estimates on what this spending will mean in terms of new capacity. One recent study, for instance, sees close to a 7% increase in production potential for the year.

On the other hand, it usually takes a while to iron out problems with new equipment. Implication: It may not be until sometime next year before supplies finally begin to ease up.

As such, a factory operating rise of another percentage point or so through year end can't be ruled out. Then look for a leveling off, and maybe a drop back to current levels by mid-1989—as the new capacity is superimposed on the smaller industrial production gains forecast for that period.


Operating rates edge higher

Industry-by-industry
(% point change from year earlier)

Primary metals	+ 11.3
Fabricated metal products	+ 5.1
Non-electrical mchy.	+ 6.6
Electrical mchy.	+ 3.0
Automotive	+ 3.6
Instruments	+ 1.6
Textile mill prod.	− 1.4
Paper & prod.	+ 2.2
Chemicals & prod.	+ 4.2
Petroleum prod.	+ 1.7
Rubber & plastics	+ 0.4
Utilities	+ 1.9

CURRENT PRICES

Let's hear less about inflation

The latest price news out of Washington would seem to belie the recent talk about accelerating inflation.

Industrial averages (as measured by the Bureau of Labor Statistics) are still rising. But the latest monthly increase—put at 0.2%—comes to less than 2.5% at annual rate.

Part of the restraint this past 30 days can be traced to energy, where overall prices dropped 1.6%. Declines in natural gas, home heating oil, residual fuel, diesel fuel, liquid petroleum gas and crude petroleum more than offset seasonal boosts in gasoline and somewhat higher electricity rates.

Also on the encouraging side: A slowdown in the rate of capital goods advance where 0.4% increases of the previous two months gave way to only a 0.1% boost. The only noteworthy increases here last month were those posted on construction equipment, industrial furnaces, and transformers and power regulators.

On a less rosy note, chemical and allied products continued their upward march, with a new 3.2% increase in organics helping to push the overall industrial chemical average up 2.7% (the biggest such advance in seven years). Plastic resins followed suit, rising by 2.8%—enough to push averages here close to 19% above year-earlier levels.

Paper is still rising—with small increases noted for paperboard, corrugated cartons, paper office supplies and waste paper. But talks with government price analysts suggest that things may be ready to level off a bit in this sector.

Ditto for metals, where aluminum, zinc and steel scrap increases are now at least being offset by some easiness in copper, brass and precious metals. And while steel is still inching up, there are signs here that future advances will be smaller and more widely scattered.

The same will probably be true for construction materials which advanced a strong 0.7% over the past 30 days. Reason: An expected demand slowdown, stemming from higher mortgage rates, could well put a damper on increases by winter—particularly in such market-sensitive areas as lumber and cement.

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STEEL SCENE

Signs point to fall-off

Most signals now suggest a modest fall-off in steel demand. Not only are inventories (both on the service center and buyer levels) high, but both groups aren't as ebullient about overall business activity.

It can best be summarized by looking at predictions on steel demand over the next three months. Thus 33% of the buyers queried by the latest NAPM survey expect to reduce their steel intake over this period—nearly twice as many as the 17% who are contemplating increases in their receipts.

Distributors responding to the latest Steel Service Center Institute (SSCI) survey tell much the same story. Indeed, an even more impressive 40% expect a decline in incoming steel orders—far more than the 16% who feel that things could improve.

This expected slowdown also shows up in new projections by SSCI president Andrew G. Sharkey. As he puts it, "Service centers will be hard pressed to retain their existing 5% lead over last year's levels in the second half."

He goes on to say, "On the whole, most important steel consuming markets, with the possible exception of energy are still sound. We anticipate that the third and fourth quarters will be strong, although unable to match last year's exceptionally strong second half. As such, the overall gain for the year will be about 3%, *versus* the 5% gain of the first half."

Sharkey is also concerned about the high level of distributor inventories. Service center steel holdings edged a bit lower in terms of days' supply over the past month. But they are still far above levels prevailing one year ago (see chart).

Service center responses back up Sharkey's warning on inventories. Some 58% consider their stocks too high while only 5% dub them on the low side relative to current shipment levels.

A modest inventory problem is also apparent on the buyer level—judging from PM responses to a question on what they intend to do with their steel tonnages over the next six months. Specifically, 56% plan on cutbacks and not one buyer contemplates an increase.

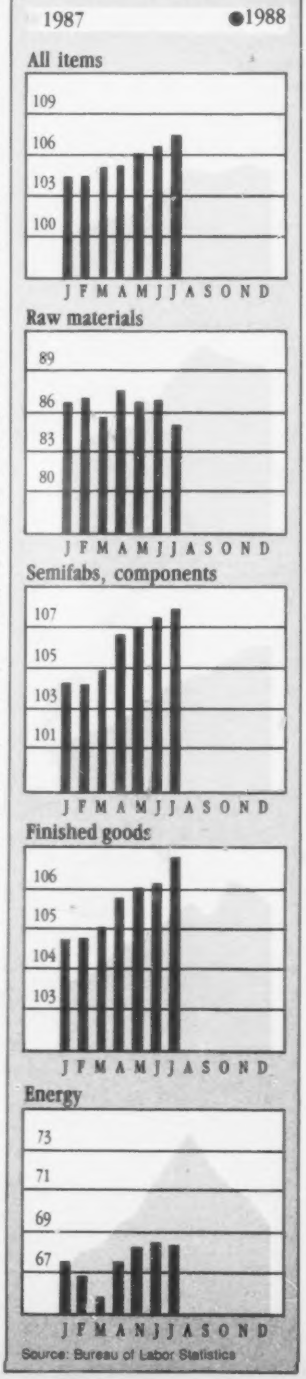
This month's breakdown

Index: 1982 = 100

	Latest level (July)	% change from: Month ago	Year ago
Bearings	112.2	0.3	4.0
Bolts, nuts, etc.	106.7	−0.1	3.4
Chemicals, inorganic	102.0	1.4	7.9
Chemicals, organic	110.5	3.2	14.9
Concrete products	110.0	−0.2	0.5
Corrugated cartons	111.2	0.5	11.1
Cutting tools, small	107.0	0.0	0.8
Electric lamps (bulbs)	122.2	0.2	1.2
Electronic components	117.7	−0.1	2.4
Fans and blowers	114.1	−0.4	3.2
Foundry and forge products	110.1	0.5	4.4
Fuel oil (residual)	39.2	−10.3	−32.6
Furniture, commercial	124.7	0.8	5.1
Gasoline	60.9	2.9	−1.8
Glass, flat	109.7	0.5	2.1
Glass containers	112.2	0.0	0.7
Gypsum products	108.3	−1.8	−12.7
Hand tools	119.8	0.0	3.1
Hand tools, power driven	111.6	0.0	2.6
Industrial furnaces	121.0	1.1	5.8
Integrating and measuring instruments	114.0	−0.3	0.2
Internal combustion engines	111.2	0.3	1.5
Lubricating oil	106.5	2.7	8.1
Lumber millwork	122.2	−0.1	3.1
Material handling equipment	107.6	0.2	3.2
Metal containers	109.6	−0.4	0.6
Metal mill shapes (nonferrous)	130.8	1.6	24.1
Metal tanks	105.4	0.8	8.9
Motors and generators	121.5	−0.2	5.6
Motor trucks	124.1	0.1	3.9
Office and store equipment	107.1	0.0	3.6
Paperboard	134.3	0.2	15.7
Paper boxes and shipping containers	124.5	0.3	8.3
Paper office supplies	115.0	0.5	6.7
Paint	112.7	0.4	4.3
Plastic resins	134.1	2.8	18.9
Precision measuring tools	121.4	−0.1	4.3
Pumps and compressors	109.1	0.5	3.7
Refractories	114.0	0.0	3.1
Rubber belts and belting	105.6	0.0	2.4
Scales and balances	105.7	−0.2	1.9
Steel products	111.2	0.2	9.6
Switchgear	113.3	−0.3	2.5
Textiles, synthetic fibers	97.7	0.9	6.9
Textiles, gray fabrics	114.9	0.3	6.4
Tires and tubes	95.3	1.3	4.7
Transformers and power regulators	108.6	1.2	1.8
Welding equipment	118.2	0.1	6.4
Wire and cable	127.1	2.5	21.6

Industrial prices

(Index: 1982 = 100)



Source: Bureau of Labor Statistics

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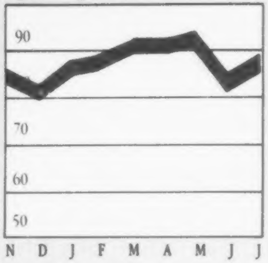
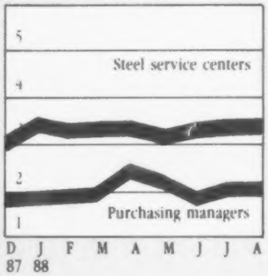
Steel

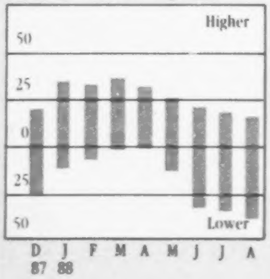
Operating rates



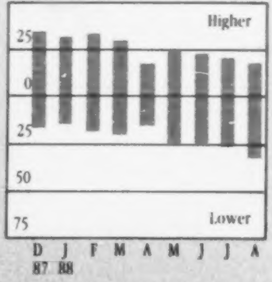
Inventories
(Months supply on hand)



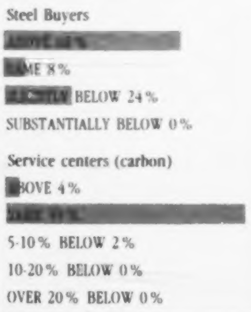
Demand
(Percent of respondents)
Service centers incoming orders



Steel buyers



Import prices
(Compared to domestic)



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

Given the above responses it's easy to see why most forecasters are calling for a meaningful drop-off in second half mill shipments—to perhaps only 37 million tons *versus* the 42 million that cleared the market during the first six months of the year.

Despite the expected demand drop, most buyers remain concerned about availability—particularly in the plate and hot-rolled sheet areas. But such fears are likely to abate by fall when mill operating rates slip and leadtimes start edging down.

Another sign that the long bull market may be leveling off is the fact that fewer service centers expect big (over 5%) price increases over the next six months. At latest report, only 3% of the respondents were worried about this kind of increase—well under the 39% high recorded at the end of 1987.

Price boosts are still expected into early 1989 but they're in the 2-5% range—pretty much in line with the general inflation rate.

Also worth noting is that a significant 8% of queried steel service centers are now thinking in terms of declining prices. While hardly earthshaking, this does represent the biggest percentage in 16 months.

PROCUREMENT STATUS

Leadtimes stay put

Modest upward and downward movements in leads almost balanced each other last month. As a result, ***PurchasingWorld*** magazine's exclusive leadtime index remained fairly close to the neutral 50 level—indicating little or no overall trend.

A general loosening up in the electric and electronic sector was about the only noteworthy development (see chart). Six of the nine products reported shorter waits over the past month.

Elsewhere, steel and nonferrous metals were basically mixed. In the latter category a narrowing in aluminum was offset by some fractional stretchouts in zinc, tin, and some of the other minor metals.

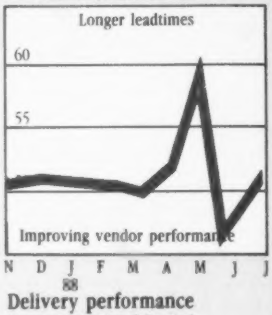
Some overall improvement did show up in another series—the NAPM survey on vendor delivery speeds. Thus while those reporting slowdowns still outnumber those getting faster service, the gap last month diminished considerably.

But this could be a seasonal effect. As the NAPM puts it, "many respondents reported their plants were closed for normal maintenance and va-

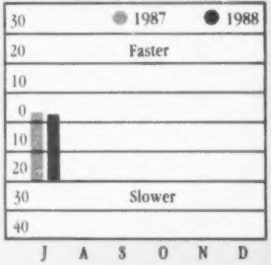
Monthly procurement status report –

Leadtime index

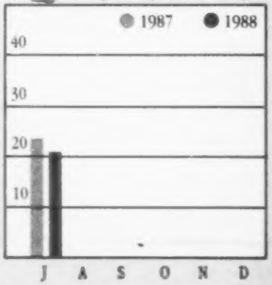
A "diffusion" index based on 158 key commodities. Above "50" indicates a tendency for leadtimes to stretch out. Below "50" suggests improving vendor performance.



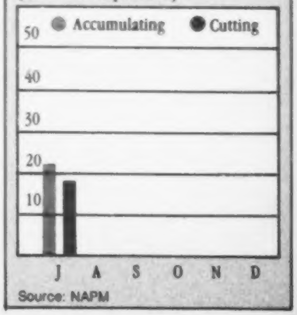
Delivery performance
(Percent reporting deliveries)



Forward commitments
(% committing 90 days in advance)



Inventory strategy
(Percent of respondents)



Source: NAPM

cations, which may have contributed to the midsummer easing in slower deliveries."

The NAPM short-supply rundown is still quite impressive. Items listed as being tight last month included such key metals as aluminum, nickel, carbon steel, stainless steel, and magnesium. And in the chemical and allied product sector, problems were noted for nylon fabric, caustic soda and soda ash, polyethylene, acrylic acid, ethylene oxide, ethylene glycol, other ethylene derivatives, methanol, MDI, and titanium dioxide. A few paper items—notably printing papers and bleached paperboard—were also cited as being hard to get.

Health and safety cost more

The nation's capital equipment buyers can expect to spend 12% more than in 1987 for safety and health gear—on top of last year's even bigger 15% advance. All told, more than $7 billion will be earmarked for these purposes in 1988.

But 1989 could bring some temporary respite—as companies begin to catch up with installing government-mandated protective equipment for the workplace. A new McGraw-Hill/DRI survey suggests overall spending for these purposes next year could be down by as much as 10%.

Totals, however, don't tell the whole story. Several industries (including steel and nonferrous metals) will actually be accelerating their outlays for health and safety gear in 1989. And others (like non-electrical machinery, fabricated metals, and chemicals), while showing decelerating gains, will still be increasing at double-digit rates.

Given these increases, there will be little long-term respite for this kind of capital spending. Since the beginning of the decade, percentage changes have alternately been negative and positive, suggesting that health and safety spending over the next few years viewed as a whole won't be all that different from the last few years.

Safety and health problems never disappear. New government and worker concerns, new processes, and new products will always require new outlays to upgrade the nation's workplaces.

It also means that 2-3% of a manufacturer's capital equipment bill will continue to be earmarked for workplace enhancement.

Leadtimes (in weeks)

	Month ago	Latest month
CHEMICALS-PLASTICS		
Adhesives	3	3
Naphthalene	2½	3
Paint	3	3½
Paint, Coil Coating	3	3½
Paint, Maint.	2½	3
Polyester Resin	1	1
Polyethylene Resin	4½	4
PVC Resin	5½	5
Titanium Dioxide	2	2
ELECTRICAL & ELECTRONIC		
Cables	8½	8½
Circuit Breakers	4	4½
Electromech. Devices	7	6½
ICs (Linear)	7½	6
Motors, Fractional Horsepower	12	11
Motors 1-10 HP	11	9½
Motors 10 HP & Up	11	9½
Relays	8	8
Transformers	10	9
LUMBER		
Hardwood	3	3
Plywood	3	2½
Softwood	2½	2½
Particleboard	3	3
OFFICE PRODUCTS		
Copiers	2	2½
PCs Workstations	4½	4½
Facsimilies	3	3½
Pre-printed Form	4	3
Elex Typewriter	3	3
Furniture	5	5½
Printers	3½	3½
Telecommunications	8	7½
PACKAGING		
Bags, Kraft	4½	4
Bags, Multiwall	6½	5½
Cartons, Corrugated	2½	2½
Cartons, Folding	2½	3
Cellophane Wrap	4	4
Plastic Bags	5	5
Plastic Pkg.	5	5
Shrink Film	2	2½
Drums, Fiber	2½	2½
Drums, Steel, Std.	2½	2½
Wood Pallets	2½	3
Wirebound Boxes	4	3½
Strapping	2½	3
PAPER		
Fiberboard	4½	4½
Glassine	5	5
Groundwood	5	5
Kraft	2½	3
Kraft, Bleached	3½	3
Kraft, Natural MFNS	1½	1½
Laminated	7	7
Tissue	5	5
NONFERROUS METALS		
Aluminum Coil	15	14
Aluminum Plate	21	19
Aluminum Sheet	17	15
Brass Castings	8	8
Brass Rods	8	7½
Brass Sheet	8½	8½
Brass Tube	8½	8½
Copper Fittings	3	3½
Copper Mill Prod.	5½	5
Copper Tube	4½	5
Lead	4½	5
Magnesium	3	3½
Manganese	8	8
Nickel	3½	3½
Silicon	1½	2
Tin	2½	3
Wire, Specialty	4½	5
Zinc	3½	4½
MISCELLANEOUS		
Bearings, Domestic	6½	8
Bearings, Foreign	16	14
Fasteners	6	7
Fasteners, Std.	2½	3½
Insulation Mat'l.	7	6
Machined Parts	6	7
Pipes & Valves	4	4
Rubber, Synthetic	2	2
Rubber Hose	4	4
Tungsten Carbide Parts	14	13
Valves, Cast Steel	5	5
Welding Supplies	2½	2
STEEL		
Cold-Drawn Bars	4	4
Cold-Rolled Sheet	11	10
Forgings	11½	12
Galvanized	3	4
Grey Iron Castings	9	9½
Hot Rolled Bars	3½	4
Pipe, Carbon	4½	5
Plate	10½	9½
Sheet	13½	12½
Sheet Castings	8½	8
Structurals	9	8
Tubing	6½	6½

Figures represent the average leadtimes from various locations.

Discounts from a higher base

The freight rate picture is beginning to change. To be sure, bargains and discounts are still around. But they're harder to find—and more and more they're being calculated off a higher rate base.

At least that's how purchasing managers queried in a nationwide *PurchasingWorld* magazine transportation survey see things. Respondents also note that rates are now rising faster than they have over the past 12 months. Equally significant, this trend is expected to spill over into 1989.

Behind the slowly changing freight procurement climate: 1) Increasing energy, labor and other costs and 2) a still-rising economy—one which is helping to reduce carrier overcapacity.

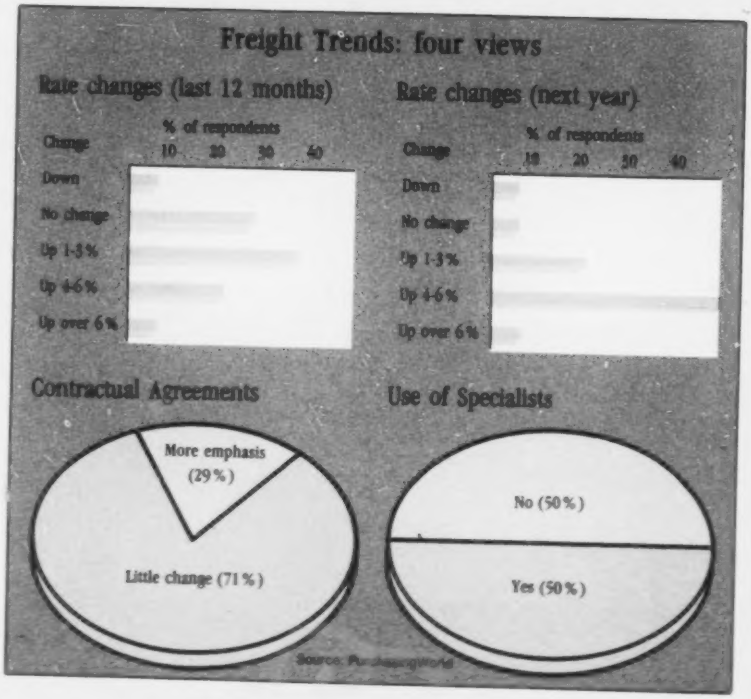
In any case, the ***PW*** survey finds that more than half of those queried expect their transportation bills to rise 4-6% in the year ahead. That's not nearly as good as the past 12 months when about three out of every four reported increases of 3% or less (see chart).

Viewed from a slightly different perspective: More than half of the respondents now anticipate some near-term rate acceleration--with most of the others hopeful they can hold boosts to this past year's prevailing levels.

Wharton Econometrics in its latest quarterly ***PW*** transportation forecast (see accompanying story) seems to back up this somewhat more inflationary rate forecast. Analysts at the Pennsylvania-based business consulting firm, for example, put this year's average increase for all transportation modes at 5%—pretty much confirming purchasing managers' views.

But averages don't tell the whole story. Both Wharton and survey respondents see some important mode-by-mode differences. Those who use barges face the biggest problems—reflecting recent large rate boosts occasioned by the Midwest drought.

Firms that use ocean freight for exporting are also concerned about significant increases—particularly on goods destined for the Far East. On the other hand, some softness continues in overseas shipments into the U.S.



Source: PurchasingWorld

Trucker increases are being sparked by the recently-inked Teamsters contract which adds 10% onto wages over the next three years. Not surprising, two small rate increases (in April and June) have already been posted by many trucking companies.

There's another labor problem here, too: The shrinking pool of potential drivers. One company traffic director figures that the available labor supply could drop by as much as 10% over the next two years—enough to put further upward pressure on an already rising rate structure.

Rail shipments, on the other hand, present fewer problems—though here, too, rates have been creeping up. But increasing emphasis on intermodal shipments, more specialized equipment, and faster, more efficient service all suggest that shippers won't fare all that badly in this sphere over the next year or so.

Air freight rates, prodded by strong demand gains, are again

...continued

showing some fair-sized rate advances. And this includes both domestic and international flights. On the latter score, both outgoing North Atlantic and Pacific flights (where strong export flows are expected) are targeted for increases ranging as high as 10% this fall.

But nobody is about to push the panic button—in air or anywhere else. For one, most of the rate increases represent catchups after years of softness. Then, too, increases aren't all that big; they're pretty much in line with the general inflation rate.

Last but not least, there are still plenty of opportunities for negotiation and bargaining. Thus, virtually every transportation buyer who can offer some sort of volume guarantee is able to knock something off official lists—with discounts in some instances running 30% or higher.

Other survey findings that indicate that rates are still a two-way street: 1) More than one out of three have made some modal changes to cut costs over the past year or so, 2) close to half now make use of brokers, shipping associations, agents, and other specialists, and 3) about one in four are putting more emphasis on contractual agreements some of which now run well over a year.

The contract approach, say some, is paying off handsomely. Indeed, savings in almost all cases run in the double-digit range. But whatever the savings, this approach is catching on—with some firms now committing 75% of their shipments to long-term pacts.

Also on an upbeat note: Most buyers still rate their carriers' performance as "good"—and a few even dub it as "excellent." That's not to say there aren't some delays, damaged shipments, and billing errors. But they are relatively few in number—as inter- and intra-industry competitive pressures force carriers to continue upgrading service and overall performance.

PW

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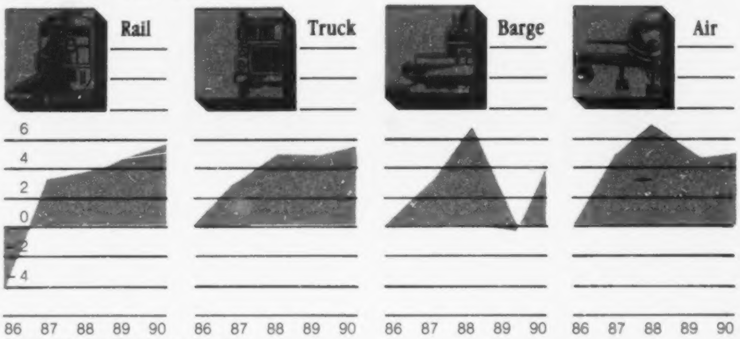
Freight rates up—for now

Freight cost outlook by mode

(percent increase over previous year)



Source: Wharton Econometric Forecasts

There's bad news and good news on the freight rate front.

First the bad news: Overall 1988 estimated increases have been scaled up from three months ago—the average freight bill is now expected to rise by 5% *vis a vis* last year. That's more than a full percentage point above the 3.9% estimate made in June (*PW* 6/88).

But forecasts for 1989 and 1990 (supplied exclusively to *PW* by Wharton Econometric Forecasting Associates—the WEFA Group) suggest slightly lower advances than previously anticipated. Next year's 4.3% overall boost compares to an earlier 4.7% estimate. And 1990's revised 5.5% boost is fractionally under figures provided in June.

Here's a more detailed rundown of what Wharton sees ahead for each of the major transportation modes:

Barge: The drought has wreaked havoc on inland water routes. Mississippi levels have dropped sharply—and Coast Guard restrictions have doubled or tripled the time required for river passages, with loads cut to reduce the risk of grounding.

The resulting higher operating costs have sparked barge rate increases as high as 25% on some routes. But next year should bring a dramatic reversal. A fractional 0.2% rate decline is forecast—in sharp contrast to this year's estimated 6.7% runup. As for 1990, a more normal 3.9% increase is projected.

Trucking: Demand gains will be somewhat harder to come by than in 1987 when tonnage soared by an eye-opening 10.8%. Reason: That earlier period had some extra help from both 1) the capturing of a bigger share of the market from competing modes and 2) an increase in nonmanufacturing shipments.

Despite smaller 1988 tonnage gains, rate increases are expected to run well above last year's estimated 3.0% advance—primarily because of the shortage of drivers. Best bet: A 4.9% increase in the average rate for the current year—with a similar advance anticipated for 1989. Some acceleration is possible by 1990 when an increase of 5.6% is forecast by WEFA analysts.

Rail: The modest demand increases of last year are continuing thanks to significantly higher metal tonnages. Also, small gains are still reported for chemicals, motor vehicles, and other products.

Piggyback traffic, meantime, continues to be the healthiest volume segment. These intermodal links (with an assist coming from double-stack LTL carriage)—plus continuing general competition with truckers—are helping to keep cost advances down. Sign of the times: Rail rate boosts over the latest 3-month period (as measured by the Bureau of Labor Statistics) came to only 1.4%.

And the moderation is expected to continue. For the year as a whole, Wharton puts the overall rail freight advance at 3.9%. On the other hand, some acceleration to 4.7% and 5.6% is anticipated for 1989 and 1990, respectively.

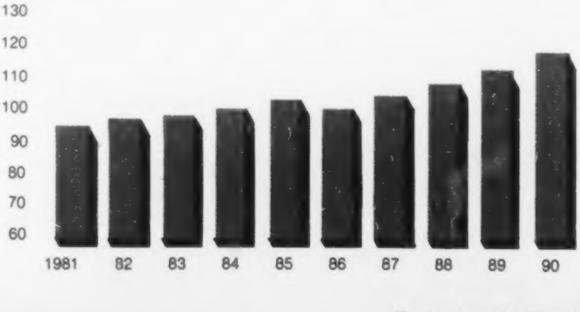
Air freight: Last year's 9.5% demand increase was no fluke—and gains this year will top the 12% mark.

Rate increases should be substantial this year (about 6.5% overall). Somewhat more modest 5.25% and 5.5% boosts, however, are projected for 1989 and 1990, respectively.

One area likely to sport higher-than-average rate increases this year is outbound international shipments across both the Pacific and North Atlantic. Boosts as high as 10% are seen for this fall. ***PW***

PurchasingWorld freight rate index

(1982 = 100)

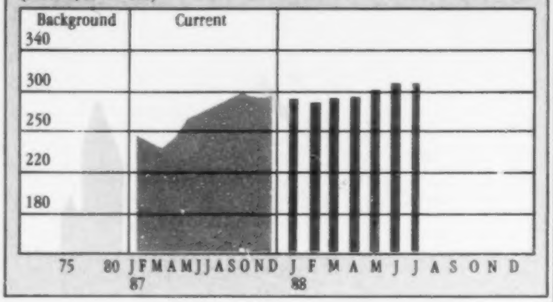


Index	%Change
1981	11.0
1982	2.0
1983	3.0
1984	0.6
1985	4.8
1986	−1.2
1987	3.0
1988	5.0
1989	4.3
1990	5.5

Raw material price barometer

(Index 1967 = 100)

Latest month 308.9
Month before 309.5
Year ago 284.2



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	16.50
Steel, bars, Pitts., cwt.	16.50	16.50	16.50
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	19.45
Steel, plates, Pitts., cwt.	22.75	22.75	19.75
Steel, plates, H.R., Pitts., cwt.	22.75	22.75	19.75
Steel, sheets, C.R., Detroit, cwt.	28.15	28.15	26.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	1.210	1.220	.765
Antimony, N.Y., dealer, lb.	.99	.95	1.06
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	1.60	1.71	1.47
Brass, yellow, [sheet], lb.	1.55	1.66	1.42
Cadmium, N.Y., dealer, lb.	7.80	8.00	1.45
Copper, electrolytic, wire bars, refd., lb.	.96	1.07	.83
Copper sheet, over 24 in., lb.	1.68	1.79	1.56
Lead, common, N.Y., lb.	.36	.36	.42
Magnesium, pig ingot, [99.8%], lb.	1.58	1.58	1.53
Mercury, 20 fl. lots, N.Y., fl.	370.00	370.00	300.00
Molybdenum, oxide, dealer, lb.	3.37	3.39	2.75
Nickel, cathode, dealer, lb.	6.60	6.60	2.32
Platinum, dealer, oz.	534.00	543.00	630.00
Silver, N.Y., oz.	6.68	6.97	7.76
Tin, N.Y., dealer, lb.	3.37	3.32	3.04
Zinc, Prime West, East St. Louis, lb.	.66	.66	.47
Zinc, die casting alloy, No. 3, lb.	.735	.735	.525
PAPER			
Uncoated book #3 offset, ton	920.00	920.00	860.00
Watermarked bond, ton	1070.00	1070.00	985.00
Gummed sealing tape, carton	17.76	17.71	17.17
Grocery sacks, ton	455.00	455.00	390.00
Solid bleached paperboard, ton	685.00	685.00	620.00
Kraft linerboard, 42 lb., unbleached, ton	410.00	410.00	350.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.281	.276	.240
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.20	1.22	1.22
Cotton middling, 1", N.Y., lb.	.604	.577	.734
Printcloth, 48", 80x80, N.Y., spot. yd.	.520	.490	.970
Army duck, 37", 13 oz., yd.	1.510	1.510	1.495
Blended printcloth, 64", 78x54, yd.	.72	.65	.94
20s combed yarns	1.96	2.00	1.96
Wool 64s, Staple, lb.	4.50	4.50	2.70
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	91.00	100.00	105.00
Benzene, petroleum, tanks, Houston, gal.	1.11	1.08	.95
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.58	.58	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.735	.735	.810
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.58	.55	.32
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.350	.350	.295
Polyethylene resin, low density liner film grade (market place), lb.	.525	.465	.345
Polypropylene, homopolymer grade (market price), lb.	.525	.515	.440
Polystyrene, general purpose grade (market price), lb.	.600	.600	.535
Polyvinyl chloride, pipe grade (market price), lb.	.420	.420	.340
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.450	.450	.400
Sulfur, crude, ex-terminal, Tampa, Fla., lt.	132.00	127.50	127.50
Sulfuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.870	.870	.770
Xylene tanks, gal.	.910	.870	.820
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	336.75	330.55	331.50
Lumber 2x2 pine, mbf, cl	329.45	321.85	334.10
Plywood, plyform, ¾", msf, cl	578.79	578.60	585.15
Plywood, ⅝", msf, cl	399.05	412.45	389.00
Cement, bulk, ton, tl	65.45	66.39	64.25
Sand, ton, cl	7.67	7.43	7.17
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	48.01	48.01	49.08
Crushed stone, 1½", ton, cl	8.56	8.57	8.28
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.90	0.91	0.90
Gypsum sheathing, ½"x1"x8", msf, tl	228.43	228.43	228.23
Brick, common, per thousand, tl	218.88	218.88	198.26
Asphalt paving, AC-20	120.78	121.95	132.97
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.98	7.58	7.51
FUELS			
Crude oil (W. Tex Int Cush), bbl.	15.70	14.70	21.00
Diesel (reseller rack, Chi), gal.	.4450	.4275	N.A.
Fuel oil No. 2 (N.Y.), gal.	.4375	.4040	.5415
Fuel oil No. 2 (Gulf spot), gal.	.4125	.3900	N.A.
Fuel oil No. 6 (N.Y.) contract cargo, bbl.	16.50	15.75	N.A.
Gasoline (reg lded NY), gal.	.4910	.6125	.5540
Gasoline (reg unlded NY), gal.	.4700	.5900	.5440
Kerosene (reseller rack, Chi), gal.	.4750	.4750	N.A.
Propane (Mt. Belvieu, Tex), gal.	.2100	.1900	.2600
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	120.00	120.00	89.00
Steel, No. 1 hvy., dlvd., Chi., ton	120.00	120.00	83.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.855	.885	.735
Copper, No. 2, East, wholesale buy, dlvd., lb.	.760	.780	.650
Brass, red, East, wholesale buy, dlvd., lb.	.815	.845	.695
Brass, yellow, East, wholesale buy, dlvd., lb.	.470	.470	.365
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.650	.655	.490
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.730	.730	.555
Zinc, old, East, wholesale buy, dlvd., lb.	.240	.240	.200
Lead, clean solids, East, wholesale buy, dlvd., lb.	.225	.220	.275
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	20.00	40.00
Paper, old corrug. box, dlr., N.Y., ton	10.00	10.00	25.00
Old newspapers, Chi., ton	10.00	10.00	N.A.
Old white ledger, Chi., ton	85.00	85.00	N.A.

[Sources: Metals Week, American Metal Market, Engineering News-Record (20-city averages), Wall Street Journal, Journal of Commerce, Chemical Marketing Reporter.]

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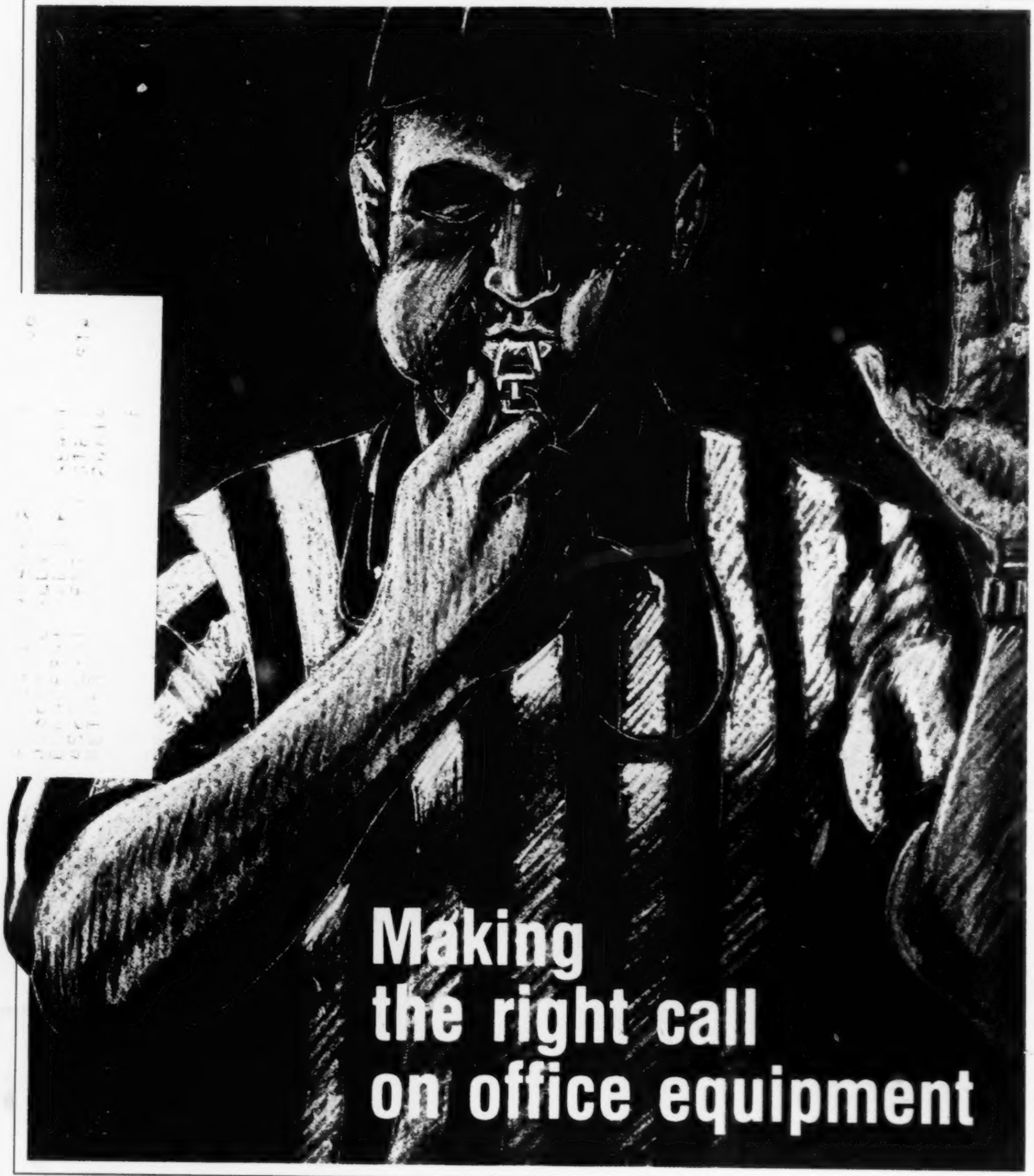
PurchasingWorld

THE BUYER'S MAGAZINE
OCTOBER 1988

PURCHASINGWORLD VOL 32 NO 10 OCTOBER 1988 Office equipment • Education Update • Public buyers



Making the right call on office equipment

PW's buyer's guide to office equipment

Education: Books boast career choices • Saving taxpayers' money

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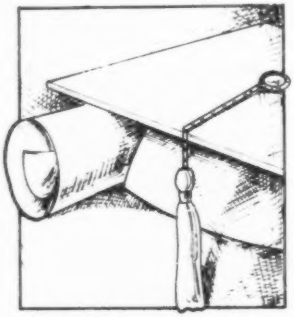

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Cover Illustration and Design by Andy Shive.

PurchasingWorld

PW POINTERS

California? RPS is in operation there now

RPS (The Roadway Package System) is now providing coast-to-coast small package surface delivery following the opening of its Los Angeles hub facility. Shortly, RPS will have 23 more new terminals operational in the western United States and California.

In business just three years, RPS is now doing $150,000,000 in sales and has a 9% market share in those areas served both by RPS and UPS. **Circle 263**

Third party testing can reduce problems for industrial purchasers

Founded in 1896 by the Edison Illuminating Companies as the first lamp testing lab in the United States, ETL Testing Laboratories, Inc., today offers product and safety performance testing, listing, labeling, follow-up and certification services around the world. ETL claims to administer more third-party certification programs than any other independent testing organization. **Circle 298**

Symbols directory makes fastener tracing possible

Fastener product traceability and hence supplier accountability, in the event of product failure and/or noncompliance with the spec, is made easier by using the 22-page directory of head marking symbols chosen by over 400 North American fastener supply sources.

Source marking promotes quality assurance since the fastener supplier knows that by affixing its mark to the product, it will be held accountable for failure or lack of conformity. Fastener buyers should carefully scrutinize any fasteners which do not bear manufacturer identification markings, particularly when the fastener bears a grade marking.

Copies of the IFI-122 directory are available for $15 from the Industrial Fasteners Institute, 1505 East Ohio Bldg., Cleveland, OH 44114. (216) 248-1482.

Keep computer data inside your building and off power lines

From outside your office industrial saboteurs can obtain your computer data through the electric power lines. To protect this data from leaving the computer and coming out a power line, International Computer Power has developed their RotoPLUS load/line isolator.

The RotoPLUS assures 100% isolation for common mode and transverse mode signal paths. This provides impenetrable security not obtainable through other technologies. **Circle 259**

Contract Manufacturers Show set for West Coast

April 11-13, 1989, the Contract Manufacturers Association will sponsor CME-West in the Los Angeles Convention Center. This will be a sister-show to the annual CME event in Detroit each fall.

Close to 500 exhibitors, representing subcontract manufacturers, OEM suppliers, component manufacturers, contract engineering and custom suppliers will participate. **Circle 75**

PMs sponsor show

The 12th annual Business and Industrial Show of East Tennessee will be held October 11-12 at the Convention/Exhibition Center on the World's Fair site in Knoxville. Sponsored by the East Tennessee Chapter of the Purchasing Management Association, the show will feature distributors, manufacturers and suppliers from eight states.

Admission is free. Pre-registration is not required. Show hours are 11:30 a.m. to 8 p.m.

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by Robert S. Reichard, executive editor

Modest inflation increase ahead

All signs point to a modest increase in inflation in 1989. The accent should be on the word "modest"—for there's still virtually nothing on the horizon to suggest any big price hikes.

The WEFA Group (Wharton Econometrics) puts the increase in overall industrial prices next year at around 4.5%—less than 1% above this year's estimated 3.7% advance. Another encouraging note is that the runup in key raw materials is finally beginning to show some signs of leveling. And this should continue—Wharton predicts smaller-than-1988 advances for both plastic resins and paper. And in nonferrous metals WEFA sees the possibility of a fractional decline for 1989.

Data Resources, Inc. (DRI), in its regular quarterly rundown of 25-30 individual product lines for *PurchasingWorld* magazine readers, tells much the same story. True, next year's prices will increase but most of the boosts should remain in the tolerable range (see accompanying story). Preliminary forecasts for 1990 suggest a similar pattern.

The moderation in both the WEFA and DRI projections are not just wishful thinking—hundreds of equations linking costs, demand and supplies have been used to come up with these results.

A closer look at these econometric forecasts suggests that there are several factors playing a role in holding down future price advances. These include 1) capacity increases in many basic raw materials, 2) somewhat smaller GNP and industrial production gains, and 3) more restrictive monetary and fiscal policies.

Price equations are also factoring in another year of relatively low energy inflation. This can't be underestimated—for over the past two decades all years of double-digit inflation have been preceded by big crude oil price runups.

There is little upward pressure in another big procurement area, too—business equipment and supplies. A new nationwide *PW* survey finds that the majority of those queried—three fourths to be exact—put the price increase next year at 5% or under.

Also reassuring is the lack of any big wage advance. Indeed, unit labor cost increases are expected to average 4% next year.

Last, there's the continuing absence of global inflation. New forecasts suggest that overseas price increases will remain relatively restrained. Thus most 1989 inflation estimates for the free industrialized western nations are put in the 4% range. The dollar seems to be stabilizing, and there seems to be little danger of any jump in import tags.

In short, things don't look bad—despite some price acceleration. In a sense, the inflation outlook should be regarded as quite positive—given the fact that 1989 will mark the seventh consecutive year of business upturn.

Will price averages deceive you?

Price averages could be quite deceiving over the next few years—as industrial product lines zigzag.

Just how much variation can be expected? New price forecasts—provided exclusively for *PurchasingWorld* magazine readers by Data Resources, Inc. (DRI)—tell the story. While the econometric consulting firm sees overall industrial averages rising 5-5.5% annually over the next two years, some sectors could post even larger boosts. And there are even a few declines thrown in to emphasize the variation.

Generally speaking, nonferrous metals and industrial chemicals—both of which jumped substantially this past year—will show the smallest advances. Energy, too, will fare well. On the other hand, some acceleration is seen for capital goods on a combination of strong demand and cost pass-throughs.

Below are DRI's detailed product-by-product projections carrying into the third quarter of 1990:

Price changes into 1990

(Comparison of third quarter pricing)

Product line	1988	1989	1990
Raw materials, energy			
Finished lubricants	8.1	4.6	5.3
Industrial chemicals	9.8	2.7	4.2
Supplies for manufacturing	4.7	4.5	4.6
Metals			
Pressure tubing, seamless carbon	21.9	4.7	3.7
Heavy structural shapes, carbon	18.9	2.8	4.7
Grey iron foundries	3.1	4.9	4.0
Iron & steel	11.7	3.8	4.2
Copper base scrap	9.2	-25.4	7.0
Copper & brass mill shapes	11.1	-5.4	8.0
Titanium sponge	2.0	4.9	5.4
Components			
Rubber belts & belting	2.3	2.4	4.3
Laminated plastic sheets	2.5	2.4	3.4
Corrugated containers	10.7	4.5	4.2
Industrial controls	2.3	3.0	3.4
Linear ICs	-0.1	4.5	4.1
Machine shop products	1.9	5.6	6.8
Construction			
Paint materials	5.3	8.2	5.6
Siding, nonheat treatables	15.3	1.3	1.4
Gypsum products	-6.7	3.8	4.3
Fabricated structural steel	6.2	4.3	6.6
Machinery			
Warm air furnaces	6.1	6.0	3.6
Fans & blowers	3.5	5.8	6.4
Railroad equipment	2.3	5.5	4.8
Capital equipment (non-mfg.)	2.5	4.2	4.1
Capital equipment (mfg.)	4.0	4.9	4.4

Source: Data Resources, Inc. Cost Forecasting Services

Air freight demand rockets

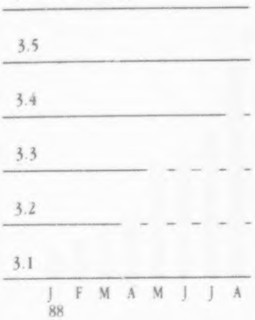
Demand is booming—with year-to-date revenue ton miles up 18% *vis a vis* compared to 1987 levels. Part of the advance is due to the continuing spurt in air package express shipments which last year zoomed up 33% in terms of actual units. Other factors influencing air freight growth include 1) increased emphasis on maintaining low inventory levels, 2) the availability of more air freight service options (same day, next day, etc.), 3) the increased use of just-in-time programs, 4) the pickup in general business, and 5) a broadening of the perception on when to use air freight.

Reduced ferrochrome availability

Reduced supply is pushing prices up through the roof. While contract quotes remain in the tolerable 71¢/lb range, spot tags have soared over the $1/lb mark. That's more than double the 40¢/lb level of early 1987—a fact that's particularly bothersome to U.S. specialty steel mills who buy more than half of their needs on spot or spot-related markets. Adding to problems are fears of South African supply reliability, low stainless producer inventories, and rising end-use demand (U.S. output of stainless is running about 20% ahead of year-ago levels).

Tin

(Dealer metal $/lb)



Tightness in tin

Prices have advanced to their highest levels in two years as dealers step up purchases in an increasingly snug market. The tightness is traceable to a combination of factors, including strict export quotas on the part of producing nations, gradually improving demand, and a decline in above-ground stocks. The latter, once as high as 80,000 metric tons, have dropped to approximately 45,000 tons. Best bet: Continued inching up, with dealer metal moving as high as $3.70-3.80/lb by year-end.

Zinc stocks low

Prices have zoomed up to 69¢/lb—a hefty 27¢/lb above the 42¢ low prevailing last fall. Behind the rise: A combination of tight supply and demand which on a Free World basis is running close to 4% ahead of 1987. One result: Zinc stocks are now at their lowest levels in 15 years.

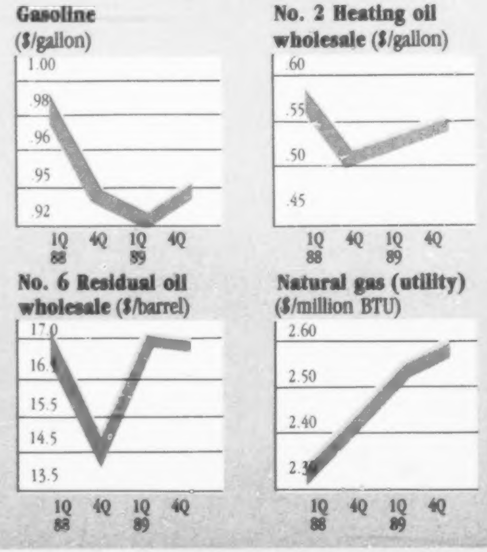
Energy prices no problem

No real problems are anticipated for near-term energy prices. New Department of Energy forecasts point to the usual seasonal swings (see chart). But 1989 prices in most energy sectors won't end up much ahead of 1988 4Q levels—and they'll be considerably lower than projected just three short months ago.

One key reason: new forecasts are predicated on a downgraded crude oil price base. Three months ago, the late 1989 crude quote was put in the $18/barrel range. Now it's down near $17/barrel—a significant 5.5% downward revision—one that reflects both the recent sharp crude oil tumble and OPEC oil production rates.

- **Gasoline:** Price averages should decline by only 2¢/gallon in 1988—as refiners' margins are beefed up. And next year when crude oil is projected to stabilize, a small 2¢/gallon average increase is anticipated.
- **Heating oil:** Prices should hold relatively stable this year. As for 1989, look for a small 1¢/gallon boost.
- **Residual oil:** Thanks to above-normal inventories, retail tags dropped nearly $2/barrel earlier this year. But seasonal influences could bring quotes up to late 1987 levels again by early next year. And for all of 1989 an advance of near 13% is now expected.
- **Natural gas:** With uncertainties over FERC Rule 500 gone, spot prices have begun to decrease from early 1988 highs. But look for some bounceback next year when averages are expected to rise about 5%.
- **Electricity:** Residential rates will fall fractionally this year. But in 1989, when all fossil fuels are expected to rise, prices could edge up about 3.5%.

Energy tags through 1989


Gasoline ($/gallon)

No. 2 Heating oil wholesale ($/gallon)

No. 6 Residual oil wholesale ($/barrel)

Natural gas (utility) ($/million BTU)

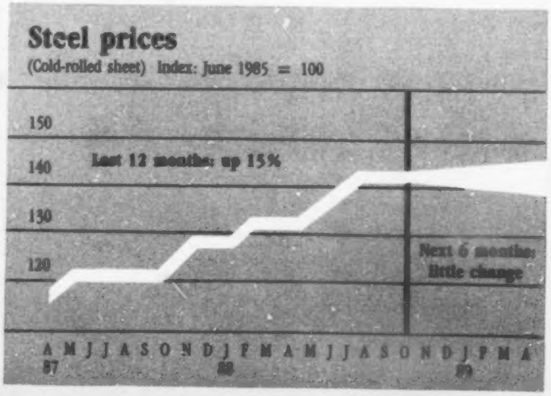
Steel prices slacken

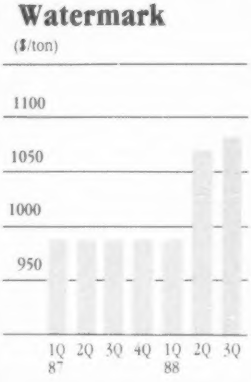
CURRENT SITUATION: Price advances seem to be slowing slightly. A 5% increase in carbon sheet products has been postponed to the beginning of 1989. And stainless cut plate producers have partially pulled back on boosts announced in August. But tin plate and tool steels have just been hit with new hikes. Surcharges of $5-20/ton have been announced for zinc. **Demand is tapering off**—domestic shipments in the last quarter were down to 20 million tons—off about one million from the first and second quarter pace.

DEMAND: The current slowdown will persist into the 4Q when 19 million tons should clear the market. **The fast 1988 start should push the yearly total into the 81 million ton range**—up nearly 6% from last year. 1989 shipments could slip into the 76-77 million ton range, as consumer durable sales (notably cars and appliances) and construction flatten out—and 2 million tons is pared off inventory levels.

SUPPLY: Recent tightness should slowly give way to better balance and shorter leadtimes by early 1989. Utilization rates in 1989 will top the 80% level—six points under this year's 86% estimate. Imports, despite their high tags, should also contribute to overall availability. **This year 21 million tons could enter the U.S.** Another 19-20 million tons (21% of the overall market) is seen for 1989.

PRICE OUTLOOK: Less-than-sensational demand is likely to put a damper on near-term increases. In the upcoming 4Q only a fractional overall advance is anticipated. Spot prices, viewed separately, could edge lower. An expected slack in demands could help offset the carbon sheet boost scheduled for early 1989. One sign of a changing market: **Automakers new contracts call for only 2-3% price increases for the 1989 model year.** This isn't likely to go unnoticed by other buyers who last year signed for 5-8% increases.





Paper prices still going up

The price trend is still up—with increases recently recorded in several printing and writing grades (including uncoated book, coated magazine, and watermarked bond) and in corrugated containers. But the latter is now at the equivalent of a $410/ton linerboard level—so little further increase is seen here until linerboard goes up again. When that will occur is anybody's guess. That's in contrast to bleached board where new increases are still being posted. Paper and paper product tags are likely to continue edging up—with averages next year expected to run 1-2% ahead of the 4-5% general inflation rate.

Lead adds a little

Add another 2¢/lb onto the producer quote—bringing the going level up to 38¢/lb. All in all, prices have advanced 4¢/lb since spring—though they are still under the peak 42¢/lb level prevailing late last year. Behind today's buoyant market: Consistently strong orders from battery makers, snug inventories—and even some delivery delays as both primary and secondary producers operate at close to full-capacity levels. Global use is up, too—with year-to-date totals running better than 3% ahead of 1987.

Used PCs hit market

Used PCs could be the answer for some cash-strapped buyers—or for those who don't need the newest technology. Hundreds of thousands of these second-hand machines are now hitting the market each year—and when they are resold they often can be had for as little as 30% of the original prices. Most of these used PCs are pretty reliable, too. Indeed, aside from their hard-disk drives which can readily be replaced, PCs seldom break down.

Aluminum rates high

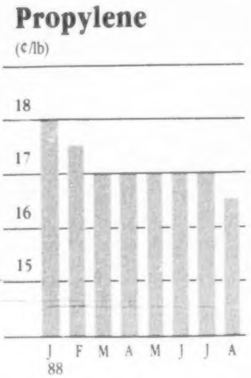
High (mid-to upper 90s) global operating rates tell the story. This has been the prime mover behind the big runup in ingot (to over $1.25/lb) And many fabricated products have also moved up significantly over the past few months. On the other hand, producers are moving cautiously in some competitive areas like can stock. Next year should see a leveling off—though ingot should hold at well above the $1/lb level through the first quarter. There should be enough supply to go around, and more is in the works. Canada, alone, is contemplating big new capacity jumps—as much as 50% if plans for five new greenfield sites materialize.

Keyboards available overnight

Look for prices to fall over the next few quarters—as more foreign suppliers jump into the market. As such, standard keyboards are available almost on an overnight basis. Prices, which were off 10% in the first eight months of the year, are beginning to fall again—with Honeywell just announcing reductions of 8-15%. Generally speaking, Taiwan and South Korea still offer the best buys—but warranties by these producers are generally a lot skimpier than those offered by other suppliers.

Propylene prices drop

This key chemical building block is bucking the trend to sharply higher prices. Indeed, the chemical grade which started the year at 18¢/lb has now dropped to only 16.5¢/lb. Even the polymer grade (at 20.5¢/lb) is holding steady—despite strong demand from polypropylene. Reason: Unlike other feedstocks, markets here have been fairly well balanced. Moreover, today's balance could well turn into some excess by next year.



Squeeze on magnesium

Figure on current supply snugness continuing for at least another 3-6 months. Behind the squeeze: Increasing demand from both the aluminum and die cast industries—increases which have dropped inventories by half since the beginning of the year (to only a 1.4 month supply). In any case, prices have moved up on a broad front—first in ingot (up 5¢/lb in June) and more recently in die cast alloy where the AZ91B grade has jumped 5¢/lb—bringing tags up into the $1.38/lb range.

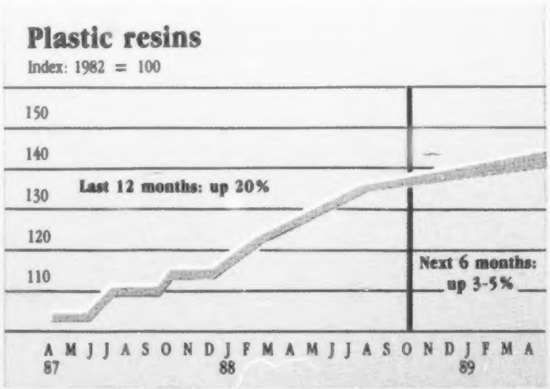
Plastic production tames prices

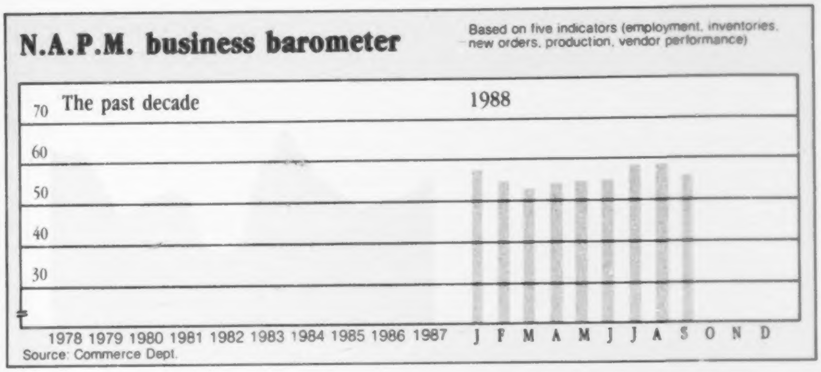
CURRENT SITUATION: The big price runup since 1986 has added 35% to average plastic resin prices. Some of the more volatile volume thermoplastics have posted much larger advances. Examples: Low-density polyethylene (LDPE) 78%, high-density polyethylene (HDPE) 70%, polypropylene (PP) 62%, polystyrene (PS) 67%, polyvinyl chloride (PVC) 42%, and ABS 63%. **Behind these huge increases:** 1) producer price catchups from previously depressed levels, 2) big increases in ethylene, propylene, styrene, and other feedstock costs, 3) strong demand gains, and 4) a high (near 95%) overall operating rate.

DEMAND: While ordering has calmed down, earlier momentum should push overall totals up 5-5.5% this year PP should lead the pack in thermoplastics—with an 8% boost. Other expected 1988 gains: HDPE (7%), polystyrene (5%), LDPE and ABS resins (each about 4%), and PVC (3%). Preliminary indications suggest smaller increases of 2-3% for 1989.

SUPPLY: While things are generally snug, there's new capacity building in the resin and feedstock areas. Next year about 8% should be added to overall thermoplastic production potential—far more than the 2-3% projected increase in demand. Upshot: Operating rates should come down after six years of increases. **Expect an 88-90% level** with ABS sporting a somewhat higher rate. In 1990 an 8% supply increase is expected, and operating rate averages could drop into the mid-80s range—or even lower if a recession sets in.

PRICE OUTLOOK: Relatively modest near-term advances are anticipated—with leveling in some volume resins like polypropylene and polystyrene. Only a 3-5% increase is seen from now through next spring. **This, in turn, suggests a 6-8% increase for overall 1989.**




N.A.P.M. business barometer

Based on five indicators (employment, inventories, new orders, production, vendor performance)

Source: Commerce Dept.

KEY ECONOMIC TRENDS

Growth rate slows

A somewhat slower growth rate seems to be shaping up for the next few quarters.

Chalk it up to higher interest rates and their impact on such areas as construction, a leveling off in Federal purchases, and somewhat more cautious consumer buying attitudes.

But these factors—while slowing down growth—won't be enough to halt the business upturn (now almost six years old). The exceptional strength in exports and capital spending virtually guarantees further GNP and production gains.

Both these areas have advanced considerably over the past year, and indications are that they will continue into 1989.

In capital spending, the fundamentals are already in place for more solid increases. Non-defense capital goods orders so far this year are running a solid 18% above comparable 1987 levels (see chart).

The bullishness here is further confirmed by an even more sensitive capital goods indicator: Machine tool orders. At latest report, year-to-date totals were leading a year ago by 80%.

The export picture is equally bullish. Real (corrected for inflation) exports so far this year are up nearly 20%—with much of the impetus coming from overseas machinery and equipment purchases.

This has helped improve the trade balance. One recent forecast puts the real deficit at only $60-70 billion at annual rate in the upcoming 4Q—down from the $110 and $90 billion figures of the first and second quarters.

But as suggested earlier, other parts of the economy may be ready to take a breather. Consumer confidence, while still high, is down from late spring peaks (see chart).

Part of this may reflect somewhat smaller gains that are expected for disposable personal income. But another factor could be the high degree of debt service payments that have accumulated in recent years. Plans to buy appliances and new cars are down from recent highs. The latter has prompted Detroit to tone down its 1989 forecasts. They are now predicting sales of about 15 million cars and trucks—off a bit from this year's estimated 15.6 million level.

Inventories still "lay low"

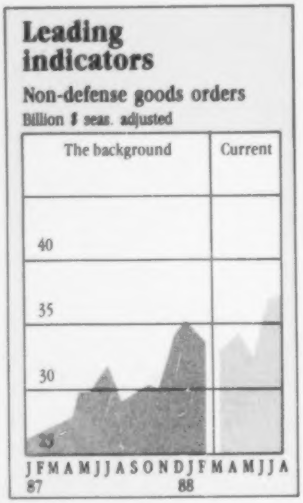
"Keep 'em lean" is still the order of the day as far as inventories are concerned.

Normally at this stage of a business upturn, stocks become a bit top-heavy—leading to the traditional inventory correction.

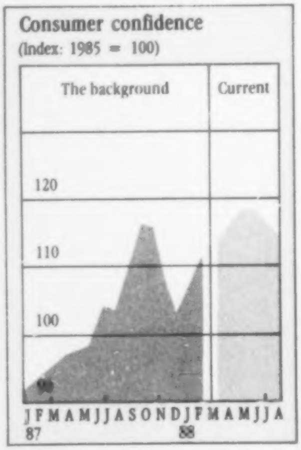
Not so this time around. Indeed, factory stock/sales ratios—both overall and in purchased materials (the PMs bailiwick)—have actually continued to fall. This in turn has resulted in all-time lows for these key economic indicators (see chart).

There are still a few specific areas where inventories could be reduced. Some buyers and distributors, for example, talk about

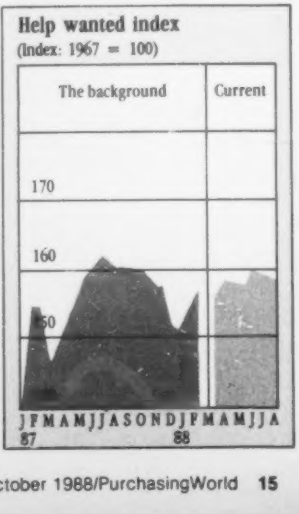
Leading indicators


Non-defense goods orders

Billion $ seas. adjusted


Consumer confidence

(Index: 1985 = 100)


Help wanted index

(Index: 1967 = 100)

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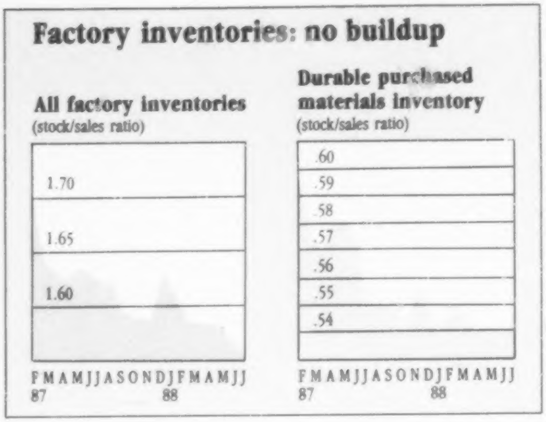


Factory inventories: no buildup

All factory inventories (stock/sales ratio)

Durable purchased materials inventory (stock/sales ratio)

steel cutbacks. And in the consumer sphere, lackluster buying in recent months has made for some inventory buildup—most notably in the appliance, home goods, and apparel fields. But these are exceptions to the general trend toward lower inventories.

Why this general downdrift? It's probably due to a combination of factors. Certainly a good part can be traced to the gradual implementation of just-in-time delivery techniques. Other things being equal, this means less inventory in the pipeline at any given moment.

But there are other factors at work. There's been less fear of shortages. Sure, some double ordering has cropped up in hard-to-get items like electronic parts. But by and large, nobody has panicked. The hedging of previous upturns is now conspicuous by its absence.

Two other inventory-restraining factors have also played a role—namely better forecasting of near-term production requirements and topside pressure to keep stocks down in a period of relatively high interest rates.

But whatever the reason or reasons, most economists see today's low stock/sales ratios as an extremely positive sign—one that virtually guarantees that incoming orders will quickly be translated into new production and a higher GNP.

On the other hand, 15 million is not a bad number. In fact, it's quite impressive by historical standards—sparking the sixth consecutive year in which sales will top the 15 million unit mark.

Employment statistics also suggest a flattening-out in overall economic activity. Note the plateauing in new job opportunities (see chart)—which is confirmed by the steady jobless rate reported over the past few months.

But it should be emphasized that there are no signs of an overall downturn. Indeed, further gains seem all but assured for the next few quarters. The NAPM business barometer (a time-tested leading indicator) remains above the neutral 50 mark.

On an industry-by-industry basis, best showings will be in the machinery and equipment sector. Add in improved exports—and these two areas of the economy will probably account for 50% of real GNP growth in the months ahead.

The paper, plastics, and chemicals areas should remain quite strong. But scattered weaknesses could develop in such sectors as mining, steel, and autos, and eventually housing and appliances.

CURRENT PRICES

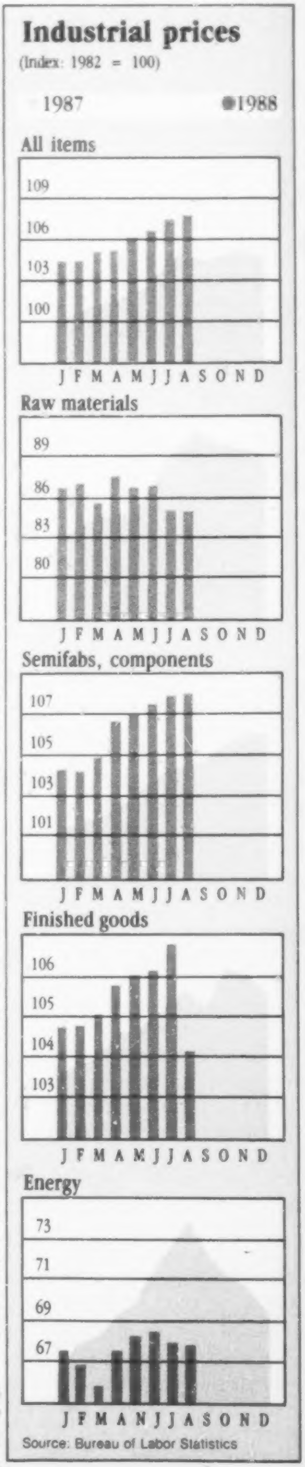
Industrial prices up steadily

Chalk up another month of slow steady rise in industrial prices. The latest advance (about 4.8% at an annual rate) pretty much repeats the pattern of recent months—with little sign of any overall acceleration or deceleration.

Leading the uptrend this time around was the chemical and allied product category. Plastic resins jumped another 2.2% over the month—bringing prices more than 21% ahead of a year earlier (see table). And organic chemicals weren't far behind, as a 1.4% advance pushed quotes close to 18% ahead of a year ago.

Energy prices also moved up a bit. But there were decreases as well as increases here. And more important, averages in this sector still remain some 8% under year-ago readings.

On the energy upside over the past month were natural gas, gasoline, and residual fuel. But declines



Industrial prices

(Index: 1982 = 100)

Source: Bureau of Labor Statistics

◄ Circle 159 on card

in home heating oil, liquid petroleum gas, jet and diesel fuels, and crude oil helped blunt the impact.

Metals, too, seem to be a two-way street these days. Thus while steel, aluminum, lead and zinc all moved higher, declines were reported in copper and brass mill shape, cadmium, nonferrous scrap and nonferrous ores.

On the other hand, machinery items—sparked by sharply improved demand—climbed at a slightly faster pace than in recent spring and summer months. Higher postings, for example, were noted for material handling equipment, pumps and compressors, internal combustion engines, and metal-cutting machine tools.

All in all, government price watchers expect about a 3% increase in equipment for the year.

This month's breakdown

Index: 1982 = 100

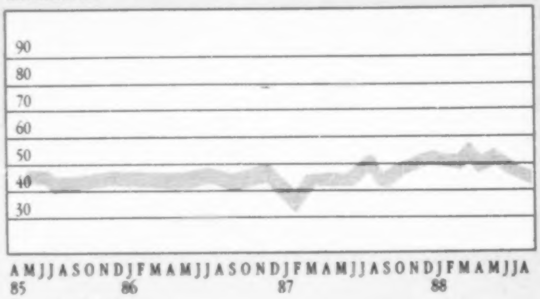
	Latest level (August)	% change from: Month ago	Year ago
Bearings	113.1	0.8	4.7
Bolts, nuts, etc.	107.0	0.3	3.7
Chemicals, inorganic	102.5	0.5	8.1
Chemicals, organic	112.4	1.4	17.9
Concrete products	110.2	0.2	0.8
Corrugated cartons	111.2	0.0	10.9
Cutting tools, small	107.0	0.0	0.8
Electric lamps (bulbs)	122.2	0.0	−0.4
Electronic components	118.2	0.4	2.7
Fans and blowers	113.4	−0.6	2.3
Foundry and forge products	110.2	0.1	4.5
Fuel oil (residual)	39.6	1.0	−35.1
Furniture, commercial	125.0	0.2	5.1
Gasoline	62.2	2.1	−3.1
Glass, flat	110.0	0.5	2.3
Glass containers	112.2	0.0	−0.6
Gypsum products	108.0	−0.3	−9.6
Hand tools	120.8	0.8	3.8
Hand tools, power driven	112.0	0.4	2.8
Industrial furnaces	121.5	0.4	6.2
Integrating and measuring instruments	114.2	0.2	0.4
Internal combustion engines	111.9	0.6	2.1
Lubricating oil	104.8	−1.6	7.7
Lumber millwork	122.7	0.4	3.3
Material handling equipment	108.0	0.4	3.7
Metal containers	110.3	0.6	1.1
Metal mill shapes (nonferrous)	131.0	0.2	22.3
Metal tanks	106.6	1.1	9.8
Motors and generators	121.9	0.3	5.5
Motor trucks	124.2	0.1	2.9
Office and store equipment	107.6	0.5	2.2
Paperboard	134.5	0.1	12.3
Paper boxes and shipping containers	124.8	0.2	8.3
Paper office supplies	115.3	0.3	7.4
Paint	112.8	0.1	3.8
Plastic resins	137.0	2.2	21.1
Precision measuring tools	121.4	0.0	4.3
Pumps and compressors	109.6	0.5	4.3
Refractories	114.0	0.0	2.9
Rubber belts and belting	107.2	1.5	3.6
Scales and balances	105.9	0.2	2.1
Steel products	111.9	0.6	10.0
Switchgear	113.4	0.1	2.7
Textiles, synthetic fibers	97.8	0.1	6.7
Textiles, gray fabrics	115.0	0.1	6.6
Tires and tubes	95.7	0.4	5.0
Transformers and power regulators	109.8	1.1	1.2
Welding equipment	118.4	0.2	6.9
Wire and cable	126.2	−0.7	17.4

NAPM procurement trends

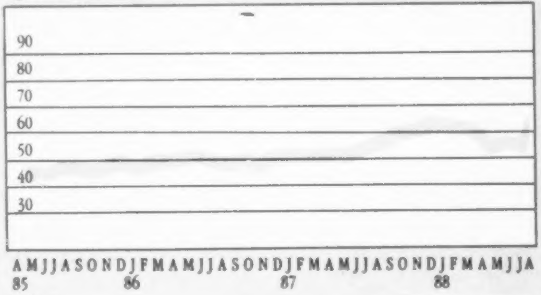
(seasonally adjusted diffusion indexes)

An index where 50 is defined as the neutral level, to the extent a reading is above 50, it represents an expansionary tendency. More particularly, rising inventory prices, and new orders are seen as positive signs of economic growth. A trend toward slower deliveries is similarly interpreted.

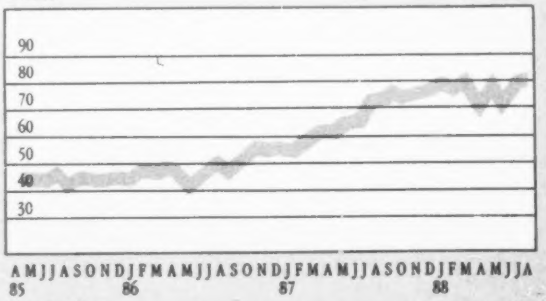
Inventories



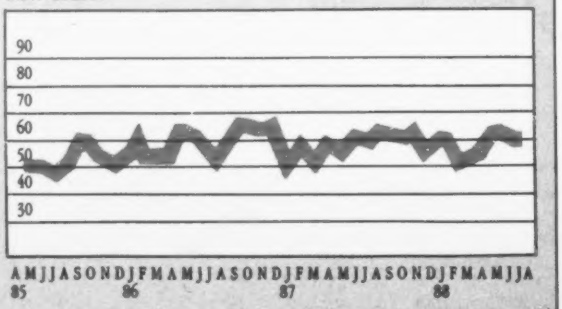
Speed of delivery



Prices



New orders



Office equipment boosts modest

Despite another year of increasing demand, office equipment price boosts have remained quite modest. More important, they're expected to remain so into 1989.

So say the majority of purchasing executives responding to a new *PurchasingWorld* magazine nationwide survey. Their general feeling: Continuing strong competition and technological innovations will limit overall boosts for most PMs to 5% or less over the next 12 months (see chart).

That's not to say that all product lines will fare equally well. Most upward pressure on prices is seen for office furniture and office supplies areas where hikes in basic raw material costs are pressing on profit margins. Some upward drift, however, is also anticipated for copiers and telecommunications equipment.

Telecom up just 3%

Increases suggested for the latter area, however, are quite moderate. It would seem to indicate a repeat of the last 12 months when telecommunications prices, as monitored by the Computer and Business Equipment Manufacturing Association (CBEMA), rose by less than 3%.

Even more encouraging—at least from the buyers' point of view—is the little change expected for electronic typewriters. And when it comes to printers, personal computer hardware and PC software, the consensus is that prices are more likely to edge lower than higher.

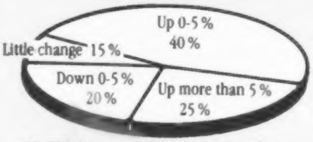
Mainframes, too, are facing more competition. Witness Amdahl's recent decision to cut prices 10-14% in response to the introduction of new IBM models.

There is also downward pressure on minicomputers. This market segment, buyers say, is losing sales to cheaper personal desktop models whose power and sophistication have grown significantly.

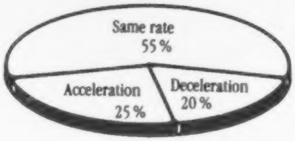
Recent increases in prices in all lines of business equipment also have to be taken with a couple grains of salt. New copier models may cost a bit more, but they are faster and easier to use. Also it's no secret that discounts of 20-30% are widely available on even single machine purchases.

Office equipment & supply price trends:

1) Price boosts will be modest



2) With no real acceleration vis-a-vis last year



Typewriters discounted too

While on the subject of discounting, PMs report 20-25% is generally being shaved off typewriters—with even bigger off-list buys available on laser printers. And facsimile machines generally run about 20% under official list levels.

A few buyers also feel fax lists should begin to head lower—as backed-up demand is gradually satisfied. Some add that the days of the $300-500 "personal" fax may only be a few years off.

A new Machinery and Allied Product Institute (MAPI) study finds that information-processing equipment which was only 5.6% of nonresidential producers' durable equipment after World War II, now accounts for over 44% of the total.

This equipment revolution, however, has created headaches as well as pluses. Thus the new *PW* survey finds that growth and rapidly advancing technology have raised problems of compatibility and obsolescence.

Some allied problems cited include 1) poor servicing, 2) lack of standardization and difficulties encountered in interfacing old and new technology, 3) the training and retraining of employees and 4) product evaluation.

One purchasing manager observes, "Our biggest problem is that we purchase so little office equipment that we don't have the time, the staff, or the incentive to become experts in these areas."

Over half lease equipment

But buyers are taking steps to deal with all these headaches. A fair number are leasing rather than buying outright. Indeed, more than half say they are leasing some of their sophisticated business equipment—thereby reducing the evaluation and obsolescence problems.

The service problem is also being tackled—with some PMs opting for maintenance cost management programs whereby maintenance firms take care of all their service requirements. Several other buyers say they negotiate service contracts with vendors at the time of order.

This negotiation, of course, generally covers more than just services. One buyer insists on a minimum of three sources before making any major equipment purchase decision. Another tells of weighing the offers of local suppliers with those of large mail-order vendors—and then taking the best deal.

Equally important is the changing role of purchasing in overall office equipment procurement strategy. The new survey finds that nine out of ten PMs are now an integral part of the equipment purchasing decision team (or even the primary decision-maker). That's far more than suggested by earlier *PW* surveys when everybody was buying what he or she wanted—leading to what one PM called "an unholy mess."

As one purchasing executive sums it up: "It's now mandatory that someone coordinate and evaluate buys in this complex and ever-changing area. What better place than the purchasing department?"

PW

Will steel take a break?

Steel activity may be heading for a modest breather.

An impressive 35% of all buyers queried by the National Association of Purchasing Management (NAPM), for example, now see a decrease in their incoming metal shipments over the next three months—far above the 11% who anticipate some increase. That's a 3:1 decrease/increase ratio—the largest such rate in two years.

The latest Steel Service Center Institute (SSCI) survey suggests a similar feeling on the part of distributors—though those anticipating declines in incoming orders (20%) outnumber those anticipating increases (16%) by a considerably smaller amount.

Inventory retrenchment also seems to be the order of the day. On the buyer front, for instance, many more purchasing managers now expect to cut than add to their stocks over the next six months.

Not surprising, 77% of SSCI members now say their inventory levels are too high compared to current shipping levels—with only 2% feeling that they're too low. That's the biggest such "too high" percentage in several years—something that suggests some near-term inventory declines.

According to Andrew G. Sharkey, SSCI president, most of the inventory increase took place in carbon, carbon flat rolled and stainless—where buildups overshadowed some modest declines in other product categories.

But, adds Sharkey, some of this increase may be deceptive—reflecting the summer demand slowdown that is just now ending. In any event, he expects a significant improvement in the months' supply ratio when the next round of SSCI numbers are released.

Prices are yet another area that distributors are watching closely. Some 45% of surveyed SSCI members, for example, still anticipate increases in their replacement costs over the next six months. The only consolation: This is a bit less than in recent months.

These price estimates are somewhat less encouraging than those suggested in *PurchasingWorld* magazine's own steel evaluation. Based on our own supply-demand-cost analysis, we see little change in overall prices through early 1989.

One possible reason for the more pessimistic buyer and distributor evaluations could be the absence of overseas price bargains. Distributors report no price breaks in stainless—with only 5% noting some small (6-10%) advantage in imported carbon grades.

Buyers tell pretty much the same story as far as import prices are concerned. Less than one out of five are now saving by going the import route—and again all of those respondents dub the advantage as "slight."

On a rosier note, these same steel buyers note a slight improvement in the availability situation. Only 67% said they were worried about supplies over the next six months—substantially under the 77% reading of the previous two months.

Biggest improvement is in the diminution of concern about plate, hot-rolled sheet and cold-rolled sheet. This more than offsets a modest increase in shortage expectations for coated sheet. ***PW***

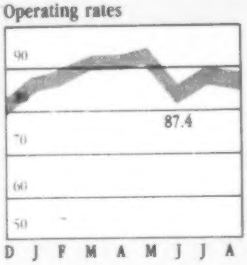
Import prices
(Compared to domestic)

Steel Buyers
ABOVE 73%
SAME 8%
SLIGHTLY BELOW 19%
SUBSTANTIALLY BELOW 0%

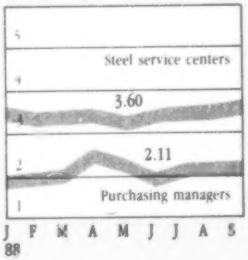
Service centers (carbon)
ABOVE 2%
SAME 93%
5-10% BELOW 2%
10-20% BELOW 0%
OVER 20% BELOW 0%

Steel

Operating rates

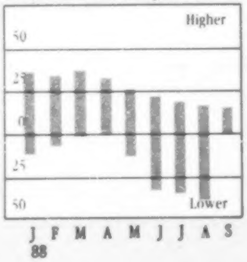


Inventories
(Months supply on hand)

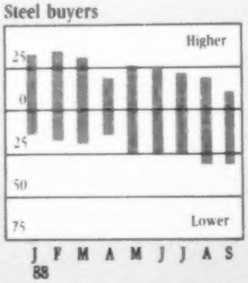


Demand
(Percent of respondents)

Service centers incoming orders



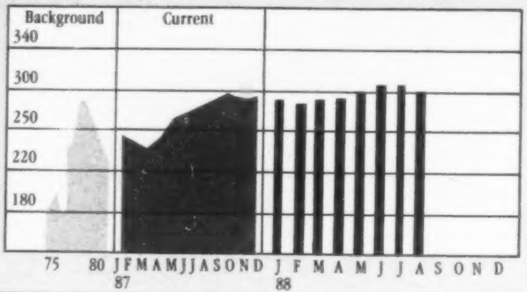
Steel buyers



Source: Steel Service Center Institute, NAPM Steel Buyers Committee

Raw material price barometer
(Index 1967 = 100)

Latest month 310.9
Month before 309.0
Year ago 288.3



Latest spot market prices

	Latest price	Previous month	Year ago
FERROUS METALS			
Pig iron, basic, valley, gross ton	213.00	213.00	213.00
Pig iron, Bessemer, Pitts., gross ton	213.00	213.00	213.00
Steel, billets, Pitts., net ton	367.00	367.00	367.00
Steel, structural shapes, Pitts., cwt.	23.90	23.90	23.90
Steel, structural shapes, Chi., cwt.	23.90	23.90	23.90
Steel, structural shapes, Los Angeles, cwt.	23.90	23.90	23.90
Steel, bars, dlvd. Phila., cwt., merchant quality	16.50	16.50	16.50
Steel, bars, Pitts., cwt.	16.50	16.50	16.50
Steel, bars, C.R., Pitts., cwt.	19.45	19.45	19.45
Steel, plates, Pitts., cwt.	22.75	22.75	19.75
Steel, plates, H.R., Pitts., cwt.	22.75	22.75	19.75
Steel, sheets, C.R., Detroit, cwt.	28.15	28.15	26.90
Steel, strip, C.R., Chi., cwt.	36.18	36.18	36.18
Steel, basic wire, Pitts., cwt.	23.65	23.65	23.65
NONFERROUS METALS			
Aluminum, ingot, lb. (market place)	1.26	1.21	.780
Antimony, N.Y., dealer, lb.	1.05	.99	1.12
Beryllium-copper, cost ingot, lb.	5.90	5.90	5.65
Brass, red, 85%, [sheet], lb.	1.71	1.60	1.45
Brass, yellow, [sheet], lb	1.66	1.55	1.40
Cadmium, N.Y., dealer, lb.	7.20	8.00	2.25
Copper, electrolytic, wire bars, refd., lb.	1.07	.96	.81
Copper sheet, over 24 in., lb.	1.79	1.68	1.54
Lead, common, N.Y., lb.	.38	.36	.42
Magnesium, pig ingot, [99.8%], lb.	1.58	1.58	1.53
Mercury, 20 fl. lots, N.Y., fl.	360.00	380.00	330.00
Molybdenum, oxide, dealer, lb.	3.48	3.37	3.02
Nickel, cathode, dealer, lb.	6.00	6.60	2.50
Platinum, dealer, oz.	528.00	534.00	600.00
Silver, N.Y., oz.	6.54	6.68	7.56
Tin, N.Y., dealer, lb	3.49	3.37	3.17
Zinc, Prime West, East St. Louis, lb.	.69	.66	.43
Zinc, die casting alloy, No. 3, lb.	.765	.735	.485
PAPER			
Uncoated book #3 offset, ton	955.00	920.00	860.00
Watermarked bond, ton	1080.00	1070.00	985.00
Gummed sealing tape, carton	17.78	17.76	17.14
Grocery sacks, ton	460.00	455.00	390.00
Solid bleached paperboard, ton	685.00	685.00	620.00
Kraft linerboard, 42 lb., unbleached, ton	410.00	410.00	350.00
TEXTILES			
Burlap, 10 oz., 40", N.Y., yd.	.284	.281	.236
Cotton drill, 1.85, 59", 68x49, N.Y., yd.	1.20	1.20	1.22
Cotton middling, 1", N.Y., lb.	.505	.604	.682
Printcloth, 48", 80x80, N.Y., spot. yd.	.500	.520	.710
Army duck, 37", 13 oz., yd.	1.510	1.510	1.495
Blended printcloth, 64", 78x54, yd.	.68	.72	.92
20s combed yarns	1.96	1.96	2.03
Wool 64s, Staple, lb.	4.50	4.50	3.00
CHEMICALS			
Acrylonitrile, tanks, lb.	.395	.395	.395
Ammonia, anhydrous, tankcars, Gulf Coast, ton	91.00	91.00	105.00
Benzene, petroleum, tanks, Houston, gal.	1.08	1.11	.93
Caustic soda, 76% solid, drums, carlots, cwt.	26.00	26.00	26.00
Cresylic acid [over 25%], tanks, lb.	.55	.55	.58
Formaldehyde, USP, 37%, [12% to 15% meth.], tanks, lb.	.106	.106	.106
Glycerine, synthetic, tanks, lb.	.735	.735	.810
Methanol, syn., tanks, 4,000 gals., f.o.b. Gulf Coast plants	.58	.58	.32
Naphthalene, crude, tanks, lb.	.22	.22	.22
Phthalic anhydride, tanks, lb.	.350	.350	.295
Polyethylene resin, low density liner film grade (market place), lb.	.515	.515	.345
Polypropylene, homopolymer grade (market price), lb.	.525	.525	.440
Polystyrene, general purpose grade (market price), lb.	.600	.600	.520
Polyvinyl chloride, pipe grade (market price), lb.	.44	.42	.36
Soda ash, 58%, light carlots, cwt.	6.15	6.15	6.15
Styrene monomer, 99.6%, tanks, lb.	.450	.450	.380
Sulfur, crude, ex-terminal, Tampa, Fla., lt.	132.00	132.00	127.50
Sulfuric acid, 66%, commercial, tanks, ton	66.86	66.86	66.86
Titanium dioxide, anatase, reg., carlots lb.	.87	.87	.77
Xylene tanks, gal.	.91	.91	.78
BUILDING MATERIALS			
Lumber, 2x4 fir, mbf, cl	336.00	336.75	329.60
Lumber 2x2 pine, mbf, cl	318.45	329.45	335.95
Plywood, plyform, ¾", msf, cl	576.95	578.79	580.65
Plywood, ⅝", msf, cl	388.35	399.05	385.95
Cement, bulk, ton, tl	65.48	65.45	64.25
Sand, ton, cl	7.87	7.67	7.21
Ready-mix concrete, 3,000 psi/cu. yd., 15 cu. yd.	49.01	48.01	49.08
Crushed stone, 1½", ton, cl	7.41	8.56	8.30
Concrete blocks, sand/gravel, 8"x8"x16", ea., tl	0.92	0.90	0.90
Gypsum sheathing, ½"x1"x8", msf, tl	228.43	228.43	228.23
Brick, common, per thousand, tl	229.22	218.88	198.26
Asphalt paving, AC-20	116.70	120.78	137.59
Concrete sewer pipe, 12", prem. joint, per foot, cl	6.98	6.98	7.50
FUELS			
Crude oil (W. Tex Int Cush), bbl.	14.25	15.70	18.95
Diesel (reseller rack, Chi), gal.	.4480	.4450	N.A.
Fuel oil No. 2 (N.Y.), gal.	.4210	.4375	.5085
Fuel oil No. 2 (Gulf spot), gal.	.4050	.4125	N.A.
Fuel oil No. 6 (N.Y.) contract cargo, bbl.	16.00	16.50	N.A.
Gasoline (reg lded NY), gal.	.4650	.4910	.4975
Gasoline (reg unlded NY), gal.	.4450	.4700	.4955
Kerosene (reseller rack, Chi), gal.	.4925	.4935	N.A.
Propane (Mt. Belvieu, Tex), gal.	.2050	.2100	.2450
SCRAP MATERIALS			
Steel, No. 1, hvy., dlvd., Pitts., ton	117.00	120.00	94.00
Steel, No. 1 hvy., dlvd., Chi., ton	115.00	120.00	90.00
Copper, No. 1, East, wholesale buy, dlvd., lb.	.920	.885	.730
Copper, No. 2, East, wholesale buy, dlvd., lb.	.830	.760	.650
Brass, red, East, wholesale buy, dlvd., lb.	.880	.815	.690
Brass, yellow, East, wholesale buy, dlvd., lb.	.470	.470	.365
Alum., old sheet/cast, E., wholesale buy, dlvd., lb.	.665	.650	.495
Alum., mixed clip., E., wholesale buy, dlvd., lb.	.750	.730	.560
Zinc, old, East, wholesale buy, dlvd., lb.	.24	.24	.20
Lead, clean solids, East, wholesale buy, dlvd., lb.	.225	.225	.275
Paper, No. 1 mixed, dlr., N.Y., ton	Nom.	Nom.	Nom.
Paper, old corrug. box, dlr., Chi., ton	25.00	25.00	40.00
Paper, old corrug. box, dlr., N.Y., ton	5.00	10.00	25.00
Old newspapers, Chi., ton	10.00	10.00	N.A.
Old white ledger, Chi., ton	85.00	85.00	N.A.

[Sources: Metals Week, American Metal Market, Engineering News-Record (20-city averages), Wall Street Journal, Journal of Commerce, Chemical Marketing Reporter.]